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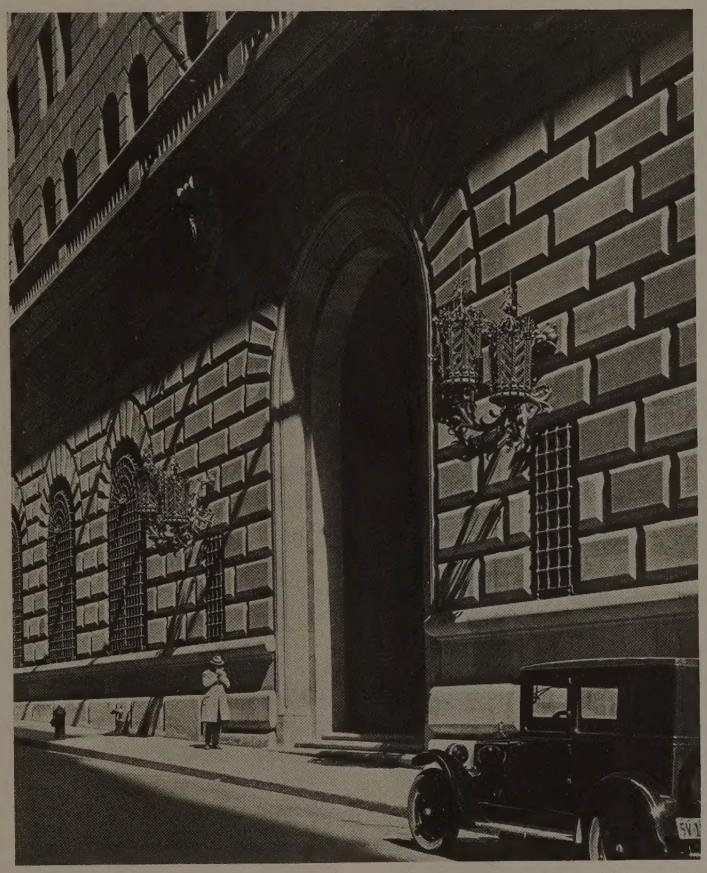


The Federal Reserve Bank New York City

YORK & SAWYER, ARCHITECTS

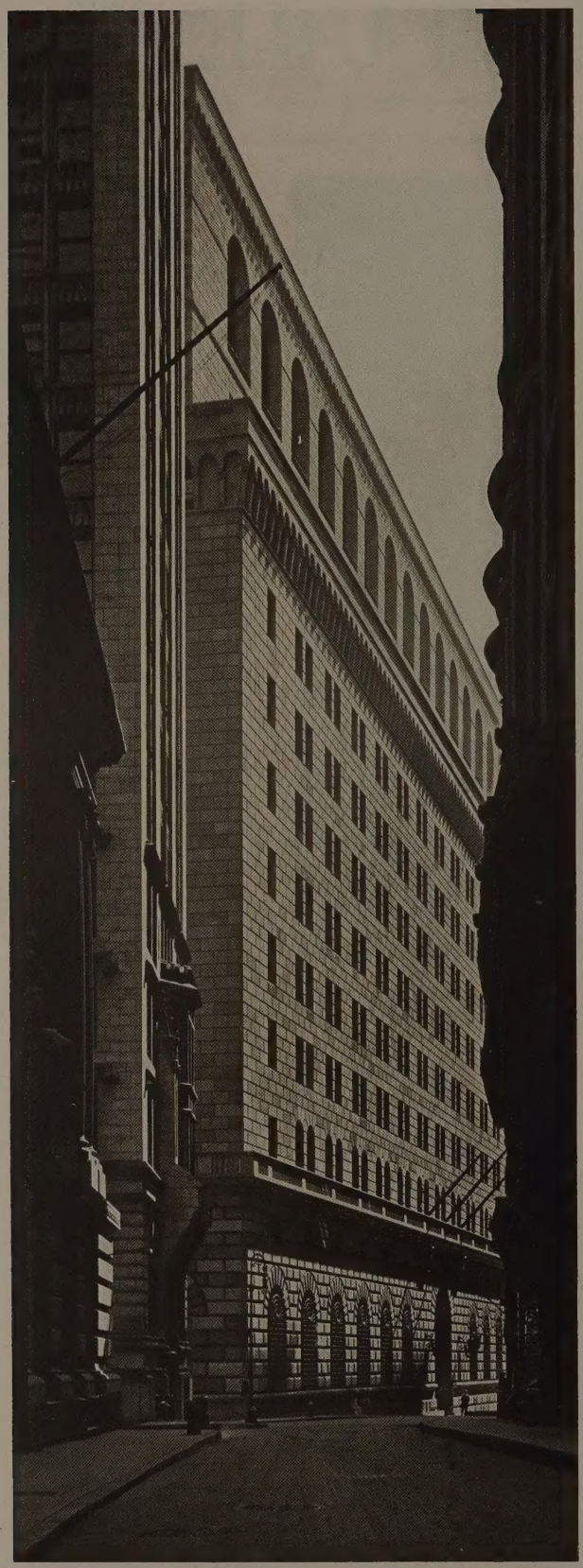
ALEXANDER B. TROWBRIDGE, CONSULTING ARCHITECT OF THE FEDERAL RESERVE BANK OF NEW YORK

By Margaret Lathrop Law

A QUARTER of a century ago the financier's wildest fling of imagination could scarcely have conjured up America's present-day Federal Reserve System or the vast economic network which constitutes its *raison d'être*. To the bank-architect of the gay nineties, fancy-free to create a small floor space, then drop here and there an officer's desk or a teller's window, the herculean task of expressing this system in the greatest of great banks, the New York Federal Reserve, would have presented insuperable difficulties. In fact, architects sat in council with bank-officers and engineers for two hundred weekly meetings, discussing each highly specialized need, before the externalization of the vast banking system was successfully achieved in sticks and stones and steel. While the problems here solved will not soon arise again, there is in the solution of each a valuable lesson for the architect as well as a consuming interest for any one who thrills to a great task well done.

The bank's activities are such that its building occupies fourteen stories above ground and five below; its total floor space is 770,000 square feet—hence the whole scale necessitates a new sense of relative values and a fresh interpretation of each detail. This, the largest of our twelve Federal Reserve Banks, conducts approximately one-third of their total aggregate operations, the gold reserve amounting to one-tenth of all the monetary gold in the world. In short, this is a wholesale bank, a bank of banks, whose customers are the United States Government and member banks, each with thousands of individual and corporate customers. From these member banks it receives deposits. It furnishes the currency and coin which banks require, it transfers funds, collects out-of-town checks at par, issues and redeems circulating notes, and, in addition, performs much financial service for the United States Government. Of primary importance is the accommodating of 2,500 employees (with possibility of 5,000) and their officers, and safeguarding the vast amount of coin, currency, and securities.

The vault, several times the size of the next largest previously built, is designed for assembling the formerly scattered gold reserves of member banks and forming a "balance-wheel of commerce and backbone for the currency system." Hence the necessity for its unusual structure, size, and location. It rests on solid bed-rock, three sides surrounded by water which extends a number of feet above the top of the vault, the fourth side being exposed to view and constantly guarded. Its massive walls, ten feet thick and new in type of construction, are protected against attack by metallic meshwork, and enclose 22,000 square feet of floor space. The signal system and method of ventilation are of



Looking down Liberty Street

themselves an interesting story. The foundations which this vault necessitated are of caisson-cofferdam type, designed by Moran, Maurice, and Proctor, and required the deepest excavation ever made for a building-cellar at the date of their building—eighty-five feet below high curb to subgrade for the lowest cellar-floor, and sixty-two feet below ground water-level.

Not only is the storage of treasure below street-level, but mail, gold, coin, currency, and securities, each in colossal amounts, are here received and shipped by armored truck. Every train coming into New York brings packages which find this their ultimate haven. The shipping-platform is of necessity a busy place where "time is money," and any unnecessary delay or misrouting costs literally most heavily. Here are received, too, supplies of furniture, stationery, material of various sorts for kitchen and medical departments, which must be despatched by the most direct route to places where they are immediately needed. Refuse paper must be eventually carted off, files stored for ready accessibility. From the nature of the bank's functions, its departmental location and arrangement differ from those of commercial banks. While its officers deal with the officers of other banks, most of its daily contacts are those of tellers with bank-messengers. Hence, on the first floor of the bank are the paying and receiving tellers and the city collection department. The volume of numerous separate transactions necessitates many small booths, inside the line of the counter-screen, into which bank-messengers may step before transacting business with the tellers. On the second floor of the bank are the departments dealing with bonds and securities, these being the only two floors to which representatives of the public need to have ready access. The officers are on the tenth floor, as it is estimated that only 5 per cent of those who come to the bank have business with them. This drastic change in the placing of the officers foreshadows a growing tendency fostered both by the increasing noise of city traffic and by the increasingly complicated system of "big business."

In 1900, when commercial banks, savings banks, and trust companies were distinctly separated both in financial and architectural expression, and when twenty millions deposits meant an exceptionally big bank, the receiving-teller was always close to the entrance and the discount and loan cages next to the officers, the clerks close enough for supervision by the eagle eye of the cashier.

Now the clerical work of the Federal Reserve Bank is conducted on many floors, and the bank, like all other employers of many men and women to-day, devotes space to rooms for medical examination, educational and recreational work. There is a co-operative store for employees, a cafeteria, a system of locker-rooms and rest-rooms, all in accordance with the tendency of the day to save the time and health of one's employees. Handling the traffic of employees within the building must be arranged elastically; at the rush hours, morning and evening, they come and go at the rate of 150 per minute. The elevator service is consequently arranged to deliver them to their places on the upper floors, and yet be accessible to the public during the

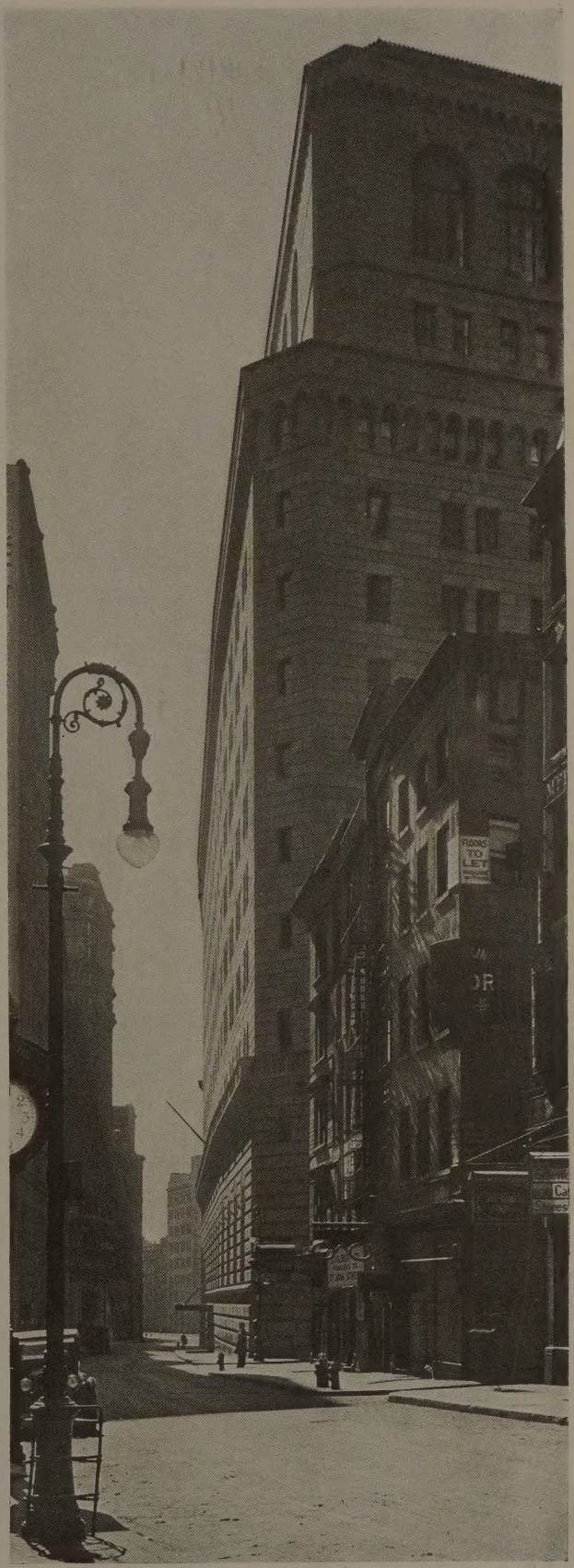
rest of the day. To accomplish this, wrought-iron gates across the elevator corridors divide the elevators into groups reserved for employees and for the public, making possible subdivisions in fours of the sixteen available elevators.

The volume of work necessitates the use of a huge mechanical equipment; for example, 400 adding machines, 286 adding typewriters, 65 bookkeeping machines, 400 standard typewriters, besides coin-counting and coin-wrapping machines, binding machines, etc. How, then, to prevent an ensuing deafening din is another difficulty, successfully solved by the use of a heavy layer of hair felt on the ceiling, with a surface-covering of perforated cloth, this installation absorbing, it is stated, 75 per cent of the noise from the machines. Since there is no court, even though the building is built over a plot of 46,000 square feet, ventilation and lighting must be accomplished artificially. Some of the working-space as far as 65 feet from windows is yet well-aired and well-lighted. By operation of the ventilating-units at both ends of the floors, the air is changed seven times an hour.

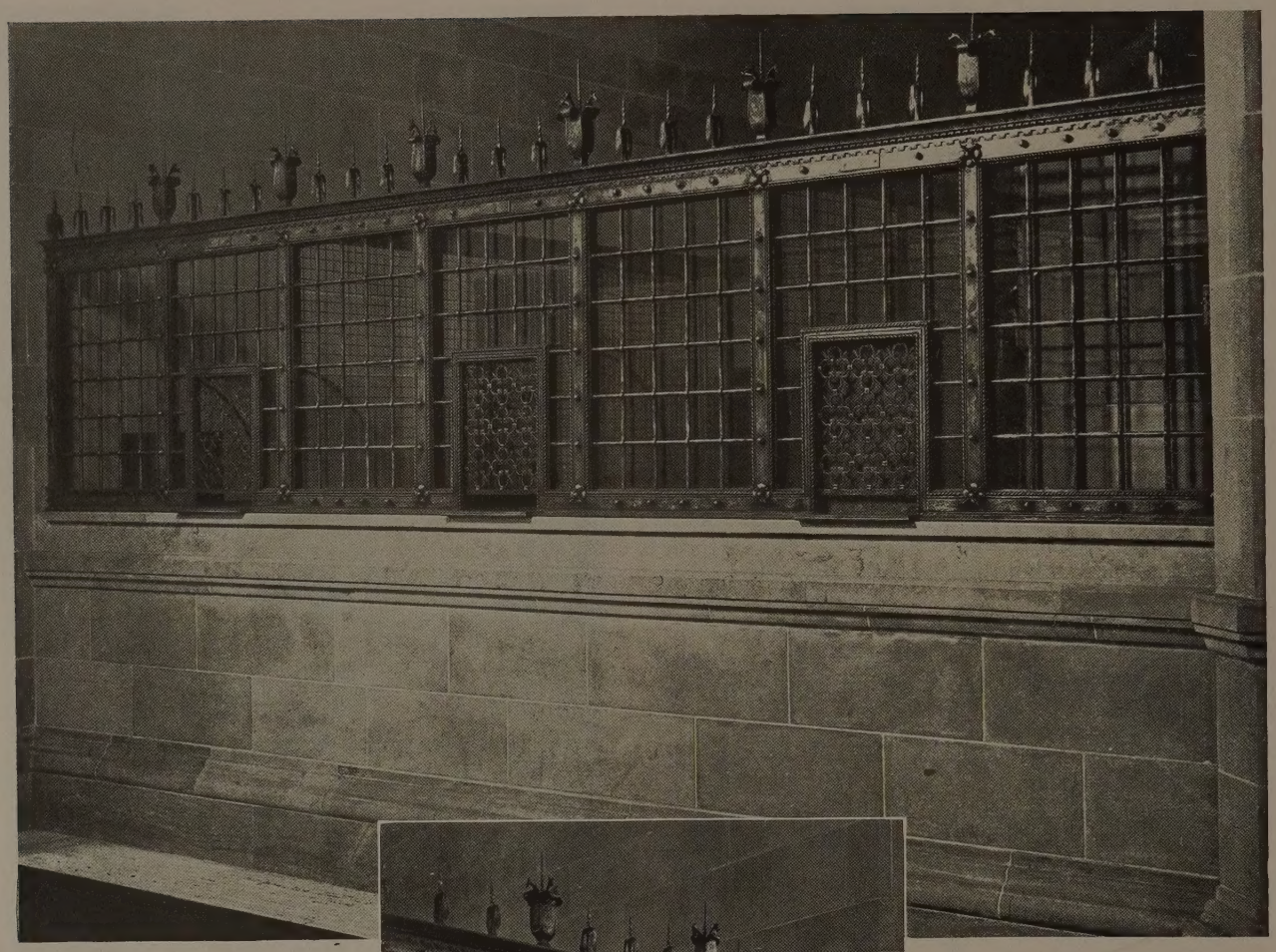
Ceiling, wall, and floor surfaces throughout the building are of plain yet substantial materials, the walls, painted a light buff, being of smooth plaster with slate base, and the floors in general covered with a reddish-brown rubber, three-sixteenths of an inch thick. There is throughout the building a surprising absence of decoration, the pleasing exception being, however, the remarkably beautiful ironwork of Samuel Yellin, the largest single contract for ironwork ever executed in modern times. Each piece of iron, from tiniest plate for push-buttons to the great 500-foot bank screen, is essentially utilitarian in purpose. Here the most ductile and the least expensive of metals has assumed form in new ways. Here skill and capacity for infinite pains have supplanted costly and quantity-production ornament. The age-old craft of Tubal Cain is made to serve modern business in an effective way. Floral, animal, and geometric design are wrought on anvil and forge out of classic background, yet adapted to the needs of the moment for corridor-gateways, elevator-doors, for the great grilles concealing the radiators in the entrance lobby, for customers' desks, lighting fixtures of all sorts, and for the long bank screen which is in every detail wrought with the individuality and sincere craftsmanship of the mediæval craftsman. The ironwork is, like the rest of the building, early Italian in style, and against the softly marked limestone walls the dark metal of natural color is particularly effective. Directness, simplicity, and indomitable strength seem to be expressed in the decorative details as well as in the general structure of this great bank, and one cannot help but feel with Kipling:

> "Gold is for the mistress—silver for the maid,
> Copper for the craftsman cunning at his trade
> . . . . . .
> But Iron, Cold Iron, is master of them all."

While it is the chief decorative note of the building, this ironwork, like the structure itself, seems to be of eternal durability.



The Maiden Lane side



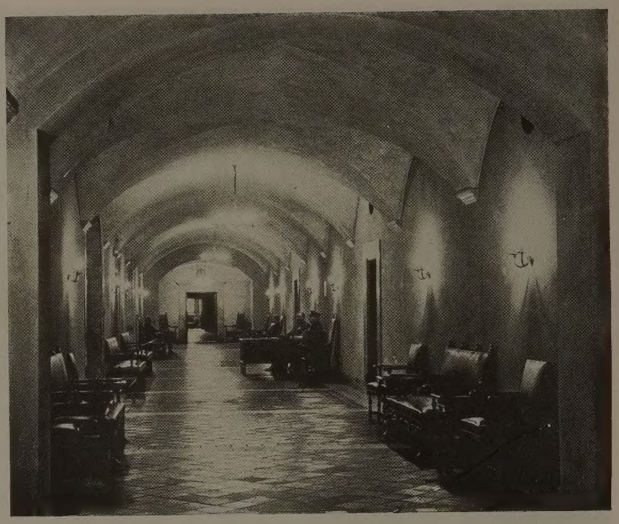
Wrought-iron bank screen and door to tellers' space

There is within the building a paramount necessity for elasticity of plan. On this subject Mr. Philip Sawyer says: "In twenty years we have never built a single bank big enough, and we have provided at times as much as two and one-half times the area already in use. The units most likely to develop must be placed apart from each other, and, if possible, near divisions most readily displaced." In fact, for more than fifty years the volume of operations of American banks has been increasing at the rate of about 7 per cent yearly. They double in size about every ten years. When the Federal Reserve Bank of New York began operations in November, 1914, it had 7 officers and 85 employees. Now it is the great research laboratory of finance as well as a workshop of enormous mechanical processes and the meeting-place of the great minds in international finance.

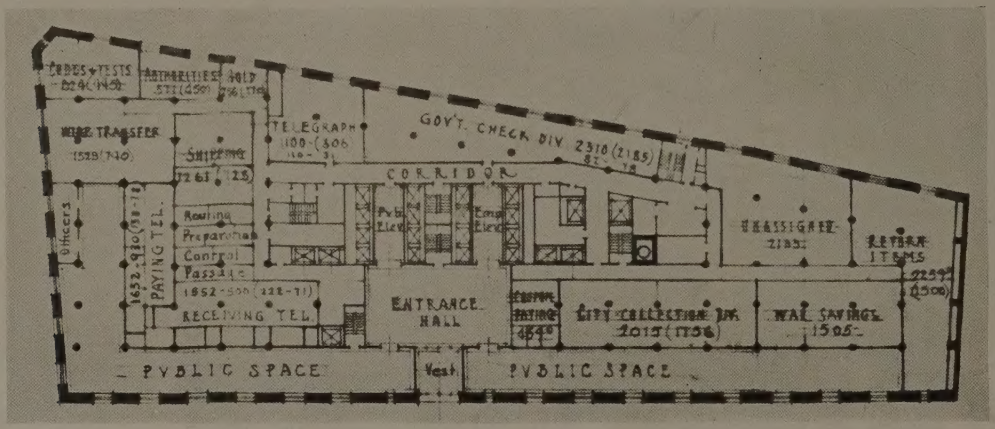
This alone tells the story of needed flexibility. Floors three to nine are made alike, allowing for big open areas. Such divisions as are now needed are made by sectional steel and glass partitions which can be moved to other locations as the departments grow. The underfloor duct system further facilitates this adaptability to future needs. A nest of conduits is so arranged that an electric current can easily be obtained when wanted at any given spot. Lighting, telephone, and elec-

Public space in the main banking-room

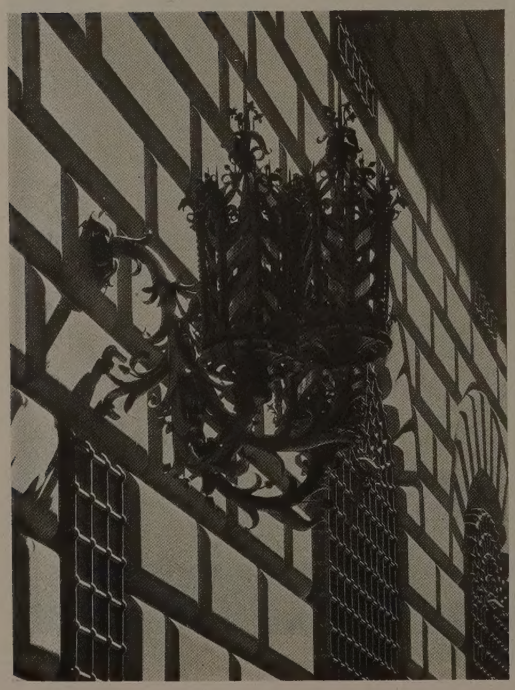
Corridor leading to officers' rooms



Corridor on the tenth floor



Plan of the first floor. The main entrance, at bottom centre of plan, is on the Liberty Street side



Wrought-iron lanterns from beside the main entrance and in the main entrance hall, the work of Samuel Yellin

Officers' room on the tenth floor, so placed because only five per cent of those who come to this bank of banks have business to transact with the officers

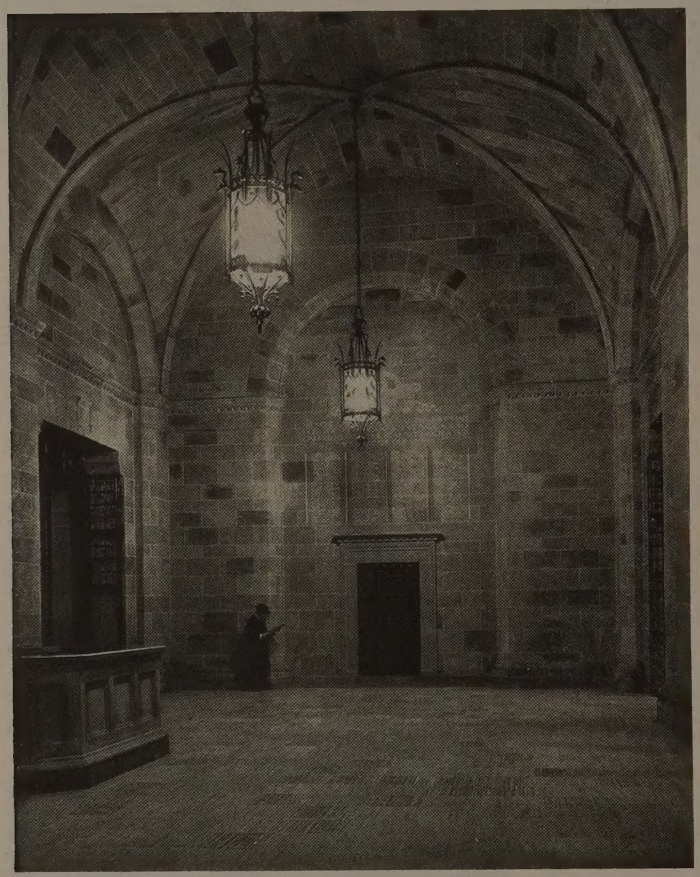
tric-bell installation are arranged in such a way as to suit location of furniture, of lights, etc. When it will all have to be changed cannot be foretold. Mr. Sawyer writes of this: "All that one can be sure of is that a modern bank is a living, growing organism, extremely sensitive to general conditions in this country and in the world, to every change in the banking system or the new laws which may at any time modify its procedure, and that any shell intended to house it will be satisfactory only in proportion as it allows the easiest modifications of practice and arrangement."

In general type of design the building shows early Italian influence, the old motifs being used in a masterful way for their new purpose by brilliant architects. In all of American architecture to-day there are few tendencies more interesting to watch than our successful and justifiable "robbing of the Hesperidean apple-orchard" in search of motif. Says one able writer on this subject: "Ours is stylistically a period of pure eclecticism. The Classic of Phidias and Augustus, the Gothic of Saint Hugh of Lincoln and Abbé Súger, the Renaissance of Brunelleschi and Peruzzi, of Lescot and Soufflot, of Van Brugh and Inigo Jones, of Egas and Herrera, have all been picked over and the choicest selected. These, however, are but the garments that drape so gracefully and display so beautifully the American body of steel and concrete within; a body which pulsates with the energy of electricity and steam, and through whose veins course the corpuscles of human lives."

So we see here in this bank the employment of vaulting and groins, arches and piers, corbels, rustication, and embrasures. Most remarkable is the use of these motifs in such a fashion that simplicity and dignity are unbroken. All is obtained at a minimum cost and with highly utilitarian purpose. Beauty of line is achieved here by the slight crowning of a corridor ceiling, there by the insistence on softness of harmonizing tones and suppression of one surplus line.

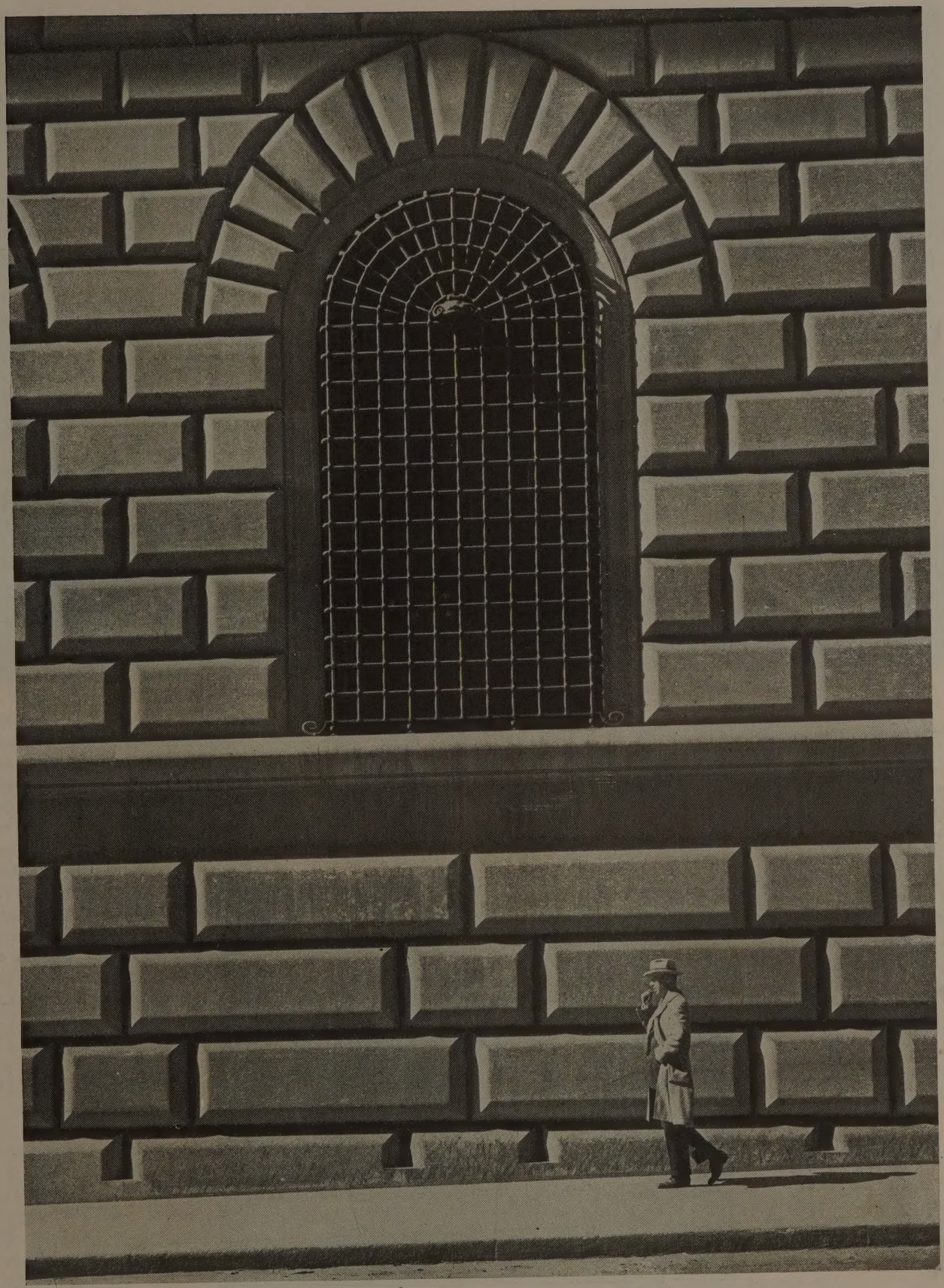
The exterior expresses the same note of dignity and, built in accord with the new zoning laws, is free of ornament other than the wrought-iron lamps which flank the doorway, and the simple iron window-grilles which add only to the general air of impregnability. Limestone is combined with sandstone, the "run of the quarry" being used in carefully studied proportions, as there is in stone of this low price and color a variation both in color and in texture, ranging from gray to buff and blue. Sixty per cent sandstone is used at the bot-

A screen on the tenth floor by which the visitors' and employees' elevators may be separated



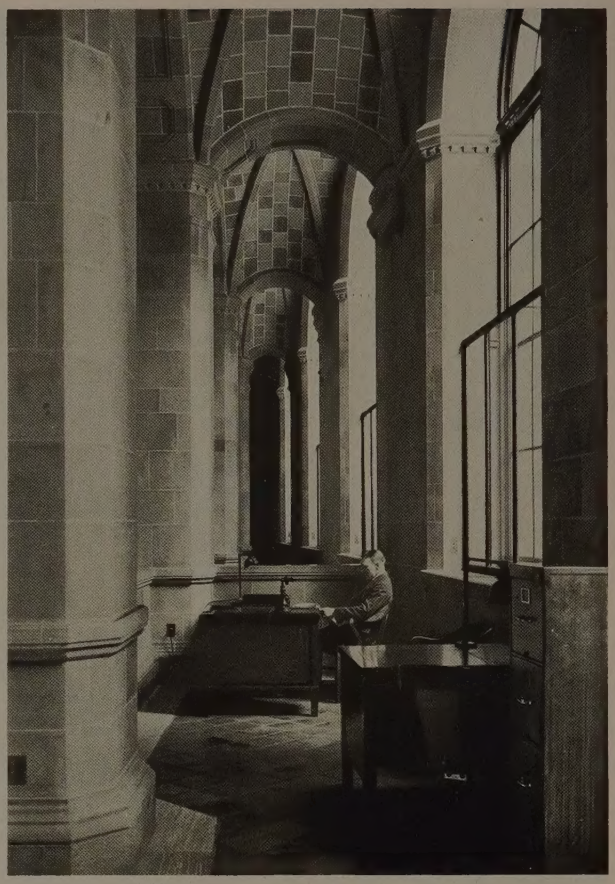
The main entrance-hall or public lobby

Wrought-iron gates between hall and public space



Suggesting the scale, dignity, and impregnability of the exterior

Loggia at the top of the building



Officers' space in main banking-room

tom, 15 per cent at the top. The desired effect of solidity and unbroken simplicity is remarkably achieved.

As we stand and gaze at this great super-bank, it seems as inviolable as the Rock of Gibraltar and no less inspiring of one's reverent obeisance. Its colossal size and its superb proportions give it an elemental quality which we feel more often in towering mountain than in a great building. The architects have achieved a quality which, for lack of a better word, I can best describe as "epic." Few men and women who cross the threshold can be so blind to line and form as not to feel a gasp of admiration at "The Wonder of Work," and a tingle at Power so ably expressed. True that in the nineties there was not a single class of building in which we excelled, or even equalled contemporary work being done in old-world architecture; yet now we cannot marvel that emissaries from many European countries are coming to learn their lessons from this outstanding bank.

Wrought-iron check-desk in the main banking-room

Acoustics of Auditoriums

Optimum Time of Reverberation

By F. R. Watson

University of Illinois

THE most important factor in the acoustics of an auditorium is the reverberation, or the time taken for an ordinary sound to die out. If this time is too long, the sounds of the succeeding words uttered by a speaker will overlap and make it difficult for a listener to understand. For music, however, the overlapping of sounds is not so serious an objection; in some cases it may even be desired, particularly where the overlapping sounds are harmonious.

Since the time of reverberation is directly controlled by the amount of sound-absorbing material in the room, a very practical question arises as to the quantity of material needed to give the best effect. In other words, what is the "optimum" time for perfect acoustics? This question is answered by obtaining first an average opinion of people regarding the good or bad acoustic conditions of a number of auditoriums. Then, on the basis of these opinions, the scientist can formulate mathematical equations by which conditions may be prescribed for securing satisfactory acoustics in new auditoriums, or for correcting defects in auditoriums already built.

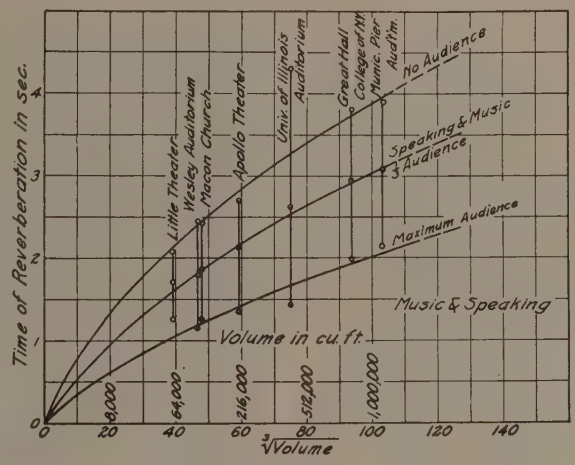


Fig. 1. Average acceptable time of reverberation in auditoriums for both music and speaking.

Working along this line, the writer constructed curves[1] showing the times of reverberation best suited for music and speaking in auditoriums of different volumes. (See Fig. 1.)

The curves in Fig. 1 give the average time of reverberation for auditoriums that are considered satisfactory for acoustics. Several features are to be noted. The optimum time increases with the volume, but according to the cube root, as indicated by the theory.[2] The time depends on the number of auditors present, because clothing is an efficient absorber of sound; so much so, that when a capacity audience is present the acoustics in any hall are usually good. The time in each case assumes the same loudness of sound; that is, a "standard" intensity of 1,000,000 times that of a sound that is barely audible. Finally, the values of the optimum time are all comparatively small, not exceeding approximately 4 seconds even for a large auditorium of 1,000,000 cubic feet volume with no audience present. Defective auditoriums have times in excess of these values—one auditorium inspected by the writer having the extreme time of 14 seconds, whereas a small theatre in which speaking was not easily understood had only 2.33 seconds; both halls, however, were too reverberant for their respective volumes and were corrected by the addition of a suitable amount of absorbing material.

The curves in Fig. 1 were modified later to give more nearly correct values for small auditoriums. Thus, from the curves, it would be inferred that the optimum time would approach a zero value for small volumes, whereas in practice it is found quite objectionable if a room is made so dead as to approach these values. Fig. 2 shows the modified curves which give an estimated minimum of .75 second for small rooms and practically the same values as before for larger volumes.

By means of the data in Fig. 2, calculations may be made for the amount of material needed for good acoustics. For instance, consider a hall of 216,000 cubic feet volume, for which the cube root of the volume is 60. Inspection of Fig. 2 shows that the optimum time with one-third audience present is 2.15 seconds. Substituting this time in Sabine's equation:[3] $t = .05V/a$, the absorption, a, equals 5,000 "units" approximately. If the absorption of the interior surfaces, seats, etc.,[4] amounts to only 1600 units, and one-third audience (375 people) adds 1725 units—both items totalling 3,325 units—there still remains the difference between 5,000 and 3,325, or 1,675 units, to be installed to insure good acoustics. This adjustment could be made by using 3,350 square feet of a material with an absorption co-efficient of 0.5 i. e. ($3,350 \times 0.5 = 1,675$ units).

For greater convenience in calculation, another set of curves was drawn that gives the necessary absorbing units for any auditorium, as shown in Fig. 3.[5] For example, in the case of the auditorium of 216,000 cubic feet volume, the number of absorbing units for one-third audience is read directly to be 5,000 units, thus

[1] "Acoustics of Buildings," John Wiley & Sons, chap. III.

[2] F. R. Watson, "Acoustics of Auditoriums," *Jour. Franklin Inst.*, July, 1924.

[3] "Acoustics of Buildings," page 24.

[4] "Acoustics of Buildings," see examples, chap. IV.

[5] *Arch. Forum*, vol. 40, p. 167, 1924.

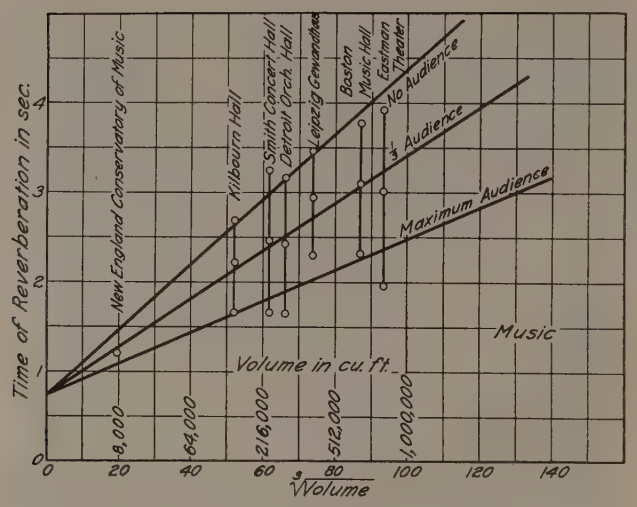


Fig. 2. Plot showing times of reverberation for small and large auditoriums.

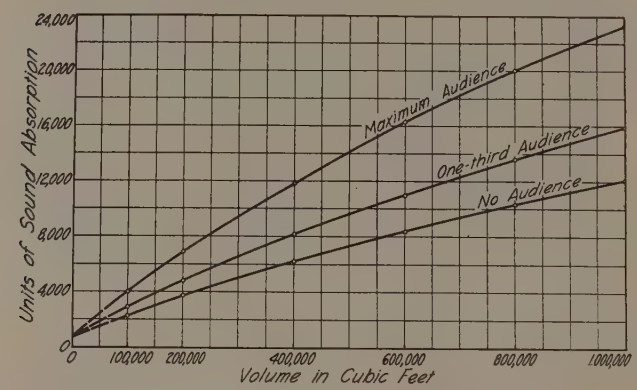


Fig. 3. Curves giving absorbing material needed for good acoustics.

avoiding the calculation of the cube root of the volume and the time of reverberation.

Fig. 3 gives data only for auditoriums up to 1,000,000 cubic feet in volume. The question arose about extending these curves for larger volumes. For instance, the writer was asked to make recommendations for several auditoriums, the volumes of which ranged from about 2,000,000 cubic feet to over 6,000,000 cubic feet. Simple extension of the curves on a larger sheet of paper proved unsatisfactory, so that logarithmic paper was used, which has the advantage of condensing the data into a line of convenient size, as reproduced in Fig. 4.

The values of Fig. 4 gave satisfactory results in correcting the acoustics of a hall of 1,850,000 cubic feet volume. In a larger room of 5,300,000 cubic feet a reasonable solution was indicated, namely, that the ceiling area of the room be treated with one of the usual commercial sound-absorbers. However, more information is desired about results obtained in auditoriums with volumes from 1,000,000 to 10,000,000 before the curves can be used with confidence.

While the foregoing curves have proved convenient and satisfactory in practical work, there is some question whether or not they represent the "optimum" conditions—that is, the most perfect acoustics obtainable. Figs. 1–4 represent a rough average of conditions in a few auditoriums. More reliable data could be obtained by an experiment in which auditors in a room express opinions on the acoustics as absorbing materials are added, piece by piece, until the optimum is reached. This procedure was followed by W. C. Sabine,[1] who found for music the value of 1.08 seconds as the preferred time for several rooms averaging 4,270 cubic feet in volume. A similar experiment by F. R. Watson [2] gave 1.04 seconds as the optimum for music in a room of 3,360 cubic feet. Experiments by S. Lifshitz [3] led to a similar conclusion, but this last investigator extended his values to include larger auditoriums. The difficulty in obtaining the optimum in a room of large

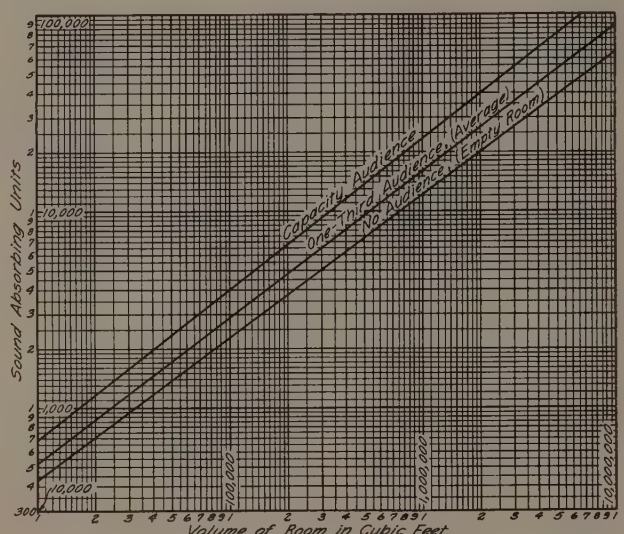


Fig. 4. Absorbing units needed for good acoustics for auditoriums up to 10,000,000 cubic feet volume.

volume lies in the considerable areas of sound-absorbing material needed to vary the time of reverberation. Lifshitz obtained such a change by means of different numbers of auditors whose clothing conveniently furnished the absorbing materials. Paul Sabine,[4] after investigating data for 15 rooms varying in volume from 3,500 to more than 1,000,000 cubic feet, finds that the time of reverberation for the "standard" intensity varies from 1 to 2.4 seconds. He also points out that the actual time to be expected in a room is usually less than the times calculated, because the audience and other absorbing units reduce the intensity from the standard value. He recommends that the time of reverberation for speaking and light music be less than the time for heavy music.

For the case of speaking, it appears desirable to have

[1] "Collected Papers on Acoustics," page 75.
[2] "Acoustics of Buildings," p. 51.
[3] *Physical Review*, vol. 25, p. 391, 1925, and vol. 27, p. 618, 1926.
[4] *Amer. Architect*, June 18, 1924.

a smaller time of reverberation. Knudsen [1] found speech more intelligible when considerable sound-absorbing material was present. His experiment consisted in speaking a series of meaningless words and then counting the number of correct interpretations by auditors in different positions in the room. For example, a room of 4,096 cubic feet volume was deadened so that the time of reverberation was decreased from 5.01 to .60 second. The per cent of correct interpretations increased from 51 to 92 for words, 94 to 99 for vowel sounds, and 71 to 96.5 for consonants.

Comparing music and speaking, Lifshitz states:[2] "For speech we determined the optimum (which was the same for the piano and violin, etc.) when the finest quality of the voice was obtained. Further decreases in the reverberation increased the clearness of speech, but the quality of the voice sounded dry (dead)." Marage [3] conducted a series of experiments in a number of halls in Paris, and concluded for vowel sounds

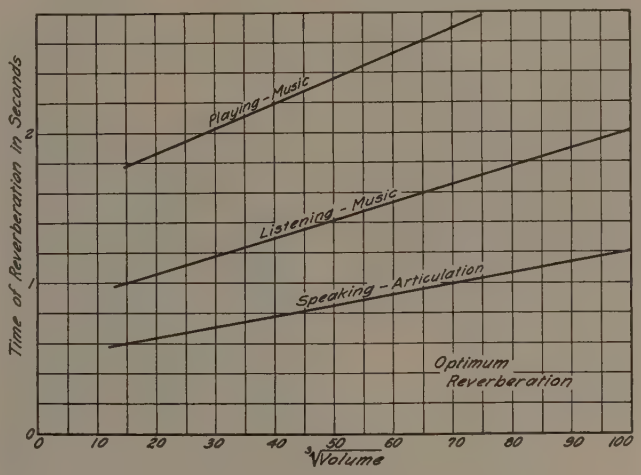


Fig. 5. Suggested optima for playing and for listening to music and speaking.

that the time should lie between ½ and 1 second. These values, however, were not estimated for the standard intensity of one million times a barely audible sound, so that they are not directly comparable with the results given by the other observers.

Thus far, the discussion has considered the optima for music and speaking for *listeners*. There appears to be a third optimum for *players* of music. It is well known that musicians favor reverberant rooms because it is "easy to play or sing" in them, and they complain when sound-absorbing materials are installed to secure "perfect" conditions, stating that such rooms are "ruined." On the other hand, such reverberant rooms are unsatisfactory for listeners. This apparent contradiction led the writer to conduct experiments to find a solution.[4] One experiment consisted in having musicians play first in a very "dead" room, and then later, as the reverberation was progressively increased, by removing portions of sound-absorbing material. At first it was "hard to play" in the room, but it became easier as the reverberation increased, until finally the notes "ran together" and several instruments could hardly be played in proper time in concert because of the overlapping sounds; but it was still easier to play than before. At the same time, listeners in the room found the conditions worse and worse as the reverberation increased. An experiment conducted in the reverse order, with the room very reverberant at first and then made successively deader, led to the same conclusions. In this room the optimum for playing was 1.8 seconds, while for listening, the optimum had the lower value of 1.1 seconds.

Further experiments were conducted in other rooms, the volumes varying from about 12,000 to 200,000 cubic feet, and it was again found that musicians found reverberant conditions satisfactory for playing, but that listeners heard better in portions of halls that were deadened.

A crucial experiment was then devised in which a small room was adjusted by sound-absorbing materials to give "perfect" conditions for listening in accordance with optimum data. Expert musicians forming a string quartet were interested to assist in the experi-

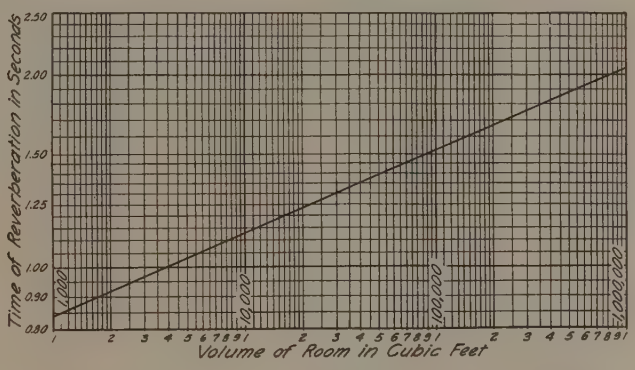


Fig. 6. Acceptable time of reverberation for music and speaking.

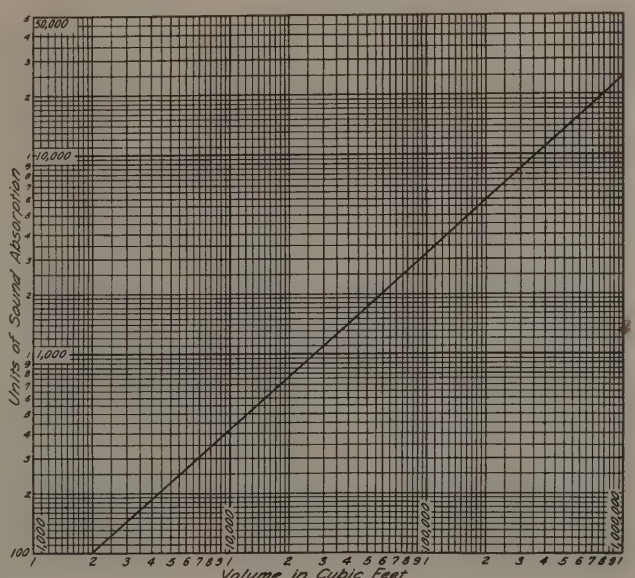


Fig. 7. Sound absorption needed for auditoriums.

[1] V. O. Knudsen, *Phys. Review*, p. 287, August, 1925.
[2] Ibid.
[3] *Jour. de Physique*, Feb., 1907, and April, 1908.
[4] *Science*, August 27, 1926, p. 209.

ment and play in the room. Their comment was immediately adverse. Some of the sound-absorbing material near them was then moved to the far end of the room and the playing resumed. The conditions for playing were "better," and listeners in the room decided the music sounded better. More material was moved in the same manner with greater improvement. Finally all the material about the musicians was transferred to the other end of the room. The room was then regarded as quite perfect for both playing and listening.

This simple experiment makes it clear why deadening a room in the usual manner produces a disadvantage for music. Musicians find it hard to play if surrounded by sound-absorbing materials, and the resultant music is not acceptable for listeners, so that the effect is unsatisfactory to all. By shifting the sound absorbents to one end of the room, a reverberant space is left for the easy generation of music—the musicians find free expression for the finer details of composition and the listeners are doubly fortunate in having good music to listen to and in having a deadened surrounding which makes listening enjoyable.

Before summarizing the discussion, it is desirable to note that the optimum times refer to the musical pitch of 512 (one octave above middle C). This tone is an average of the pitches 64 to 4,096, usually considered to cover the range of sounds heard under ordinary conditions, so that optimum values for other pitches do not seem necessary at the present time. Musicians differ in their opinions of perfect conditions, and it is desirable to wait until acoustically adjusted rooms are in more common use before attempting a closer estimate of optimum values.

After considering all the information set forth in this paper, the writer suggests the optima for playing, for listening to music and speaking, and for speaking alone, as given in Fig. 5.

While opinions about optimum values are somewhat at variance, it is necessary to have some definite numerical guidance in the practical design and correction of acoustics of auditoriums. Fig. 6 gives the suggested optimum time of reverberation for average conditions for music and speaking. The values are plotted on logarithm paper, which makes it unnecessary to calculate the cube root of the volume as before.

Fig. 7 is the corresponding curve that gives the amount of absorption needed for any auditorium for the same range of volumes.

The data in the curves of Figs. 6 and 7 have been used in the adjustment of a considerable number of auditoriums with satisfactory results. The optimum time should be applied to the average audience; that is, usually from two-thirds to capacity audience. Modern auditoriums are too expensive to build except for large audiences. A good working-rule is to install enough absorbing materials to make the optimum time of Fig. 6 apply between two-thirds and capacity audience, provided, for the empty auditorium (no audience), that the time does not exceed .75 to 4 seconds, as shown in Fig. 2. For example, in the auditorium of 216,000 cubic feet, already described, the optimum time is 1.55 (Fig. 6) and the optimum number of absorbing units is 6,400 units (Fig. 7). To make this optimum apply for a two-thirds audience, add the absorption of two-thirds audience (3,450 units) to the absorption of the empty hall (1,600 units) and subtract the sum (5,050 units) from the optimum (6,400), leaving 1,350 units to be installed. According to Fig. 5, it would appear of advantage to distribute the absorbing material so as to have the space reverberant about the musician or speaker, and to add more absorption about the audience, giving the average reverberation, however, as in Fig. 6.

Other examples might be given, but enough has been explained to illustrate the general procedure. Each auditorium has special features to be considered and it is only by experience that best results are obtained.

VASES IN THE ROYAL GARDENS, ARANJUEZ, SPAIN PHOTOGRAPHS BY PAUL HERMANN

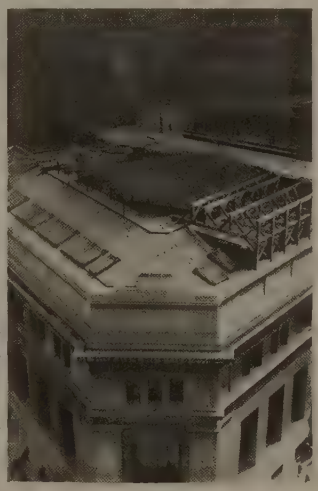
Architectural News in Photographs

A recently completed building for the Manhattan Storage and Warehouse Co., Third Avenue and 80th Street, New York City. Francis Y. Joannes, Architect

Hotel Mark Hopkins, San Francisco's newest hostelry, located on the site of the mansion of Mark Hopkins, forty-niner and pioneer. Weeks & Day, Architects

Sir Edwin Lutyens has recently come over to arrange for the building of the new British Embassy, at Observatory Circle, Washington

Fifth Avenue, New York, has not lacked for variety in its architectural styles, but this new building for Vantine's is, we believe, the first to utilize Chinese motifs. Springsteen & Goldhammer, Architects

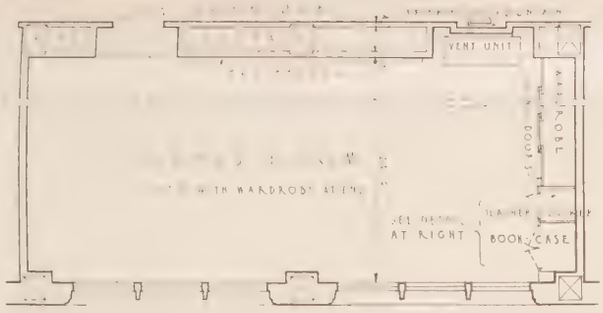


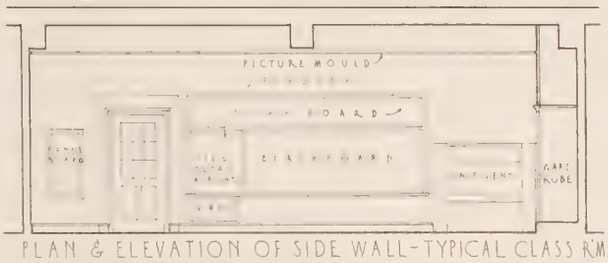
J. P. Morgan & Co. are allowing the Equitable Trust Co.'s addition to be built over its head—possibly the first case of leasing the air above a site. The overhang is very slight, in the rear corner

Philip Hooker's Albany Academy, built in 1815, which is being discussed as a possible residence for New York's governors. The Academy is to move into the country

The proposed Temple Emanu-El, New York. Robert D. Kohn, Charles Butler, Clarence S. Stein, Architects Associated; Mayers, Murray & Phillip, Consultants

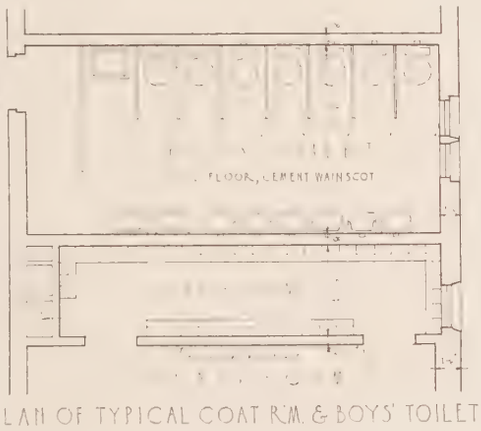
La Flèche, Notre Dame — PHOTOGRAPHIC STUDY BY JAMES H. HIBBEN





PLAN & ELEVATION OF SIDE WALL - TYPICAL CLASS R'M.

WILSON AVE. GRADE SCHOOL, NEWARK, N.J. SCALE 1/8" = 1'-0"

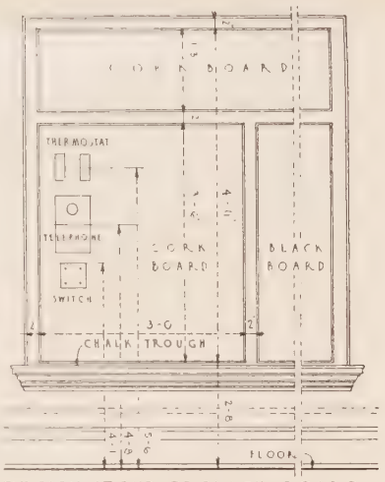


PLAN OF TYPICAL COAT R'M. & BOYS' TOILET

GRADE SCHOOL; SOUTH ORANGE, N.J. SCALE 1/8" = 1'-0"

½ F.S. DETAILS FOR CORK- & BLACK-BOARDS

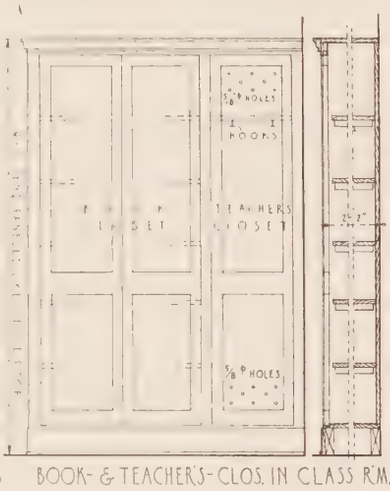
BUFFALO & FRONT STS., JUNIOR HIGH SCHOOL, JAMESTOWN, N.Y.



TYP. ELEV. AT END OF BLACK-BOARD

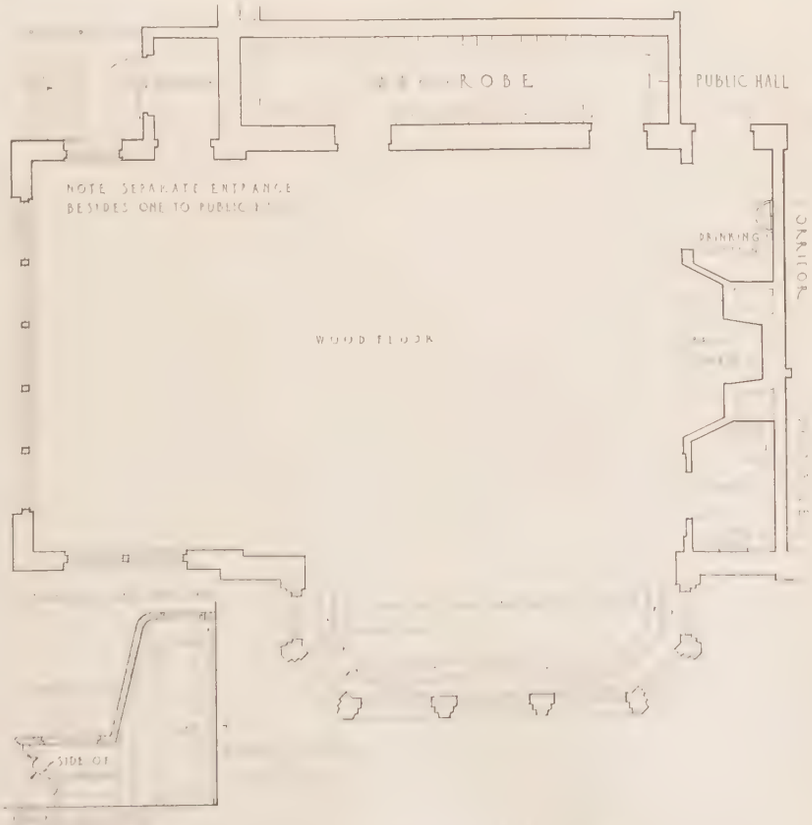
SCALE: ½" = 1'-0"

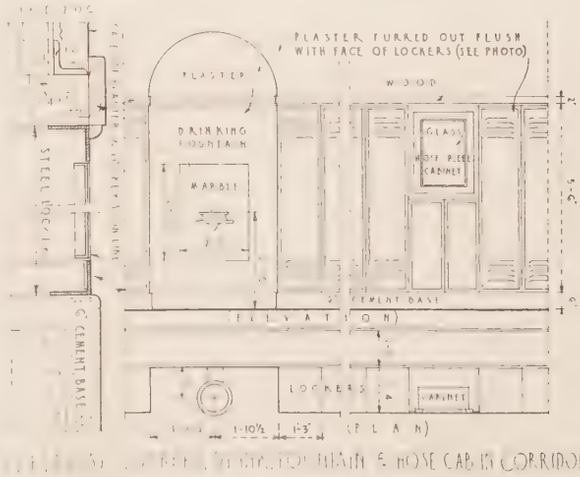
JUNIOR HIGH SCHOOL; JAMESTOWN, N.Y.



BOOK- & TEACHER'S-CLOS. IN CLASS R'M.

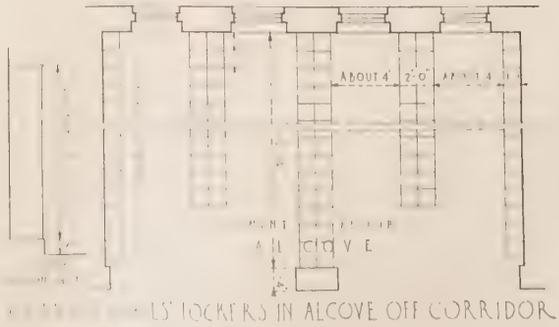
SCALE: ½" = 1'-0"





DRINKING FOUNTAIN & HOSE CABINS IN CORRIDOR

HIGH SCHOOL; VINELAND, N.J. SCALE: ¼" = 1'-0"



LS' LOCKERS IN ALCOVE OFF CORRIDOR

KEARNY, N.J. SCALE: 1/8" = 1'-0"

SCHOOL-BUILDING DETAILS OF CLASSROOMS, KINDERGARTENS, AND LOCKERS

DRAWN BY GERALD K. GEERLINGS

GUILBERT & BETELLE, ARCHITECTS

NOTES

School-Building Details of Classrooms, Kindergartens, and Lockers.
Guilbert & Betelle, Architects.

Classrooms.—Wardrobe either at end of room (2′ deep) with sliding doors, or in separate room (5′ 4″ wide). Corkboard at top and sides of blackboard for pinning drawings, etc., is 3′ wide at side of blackboard, where thermostat, telephone, and electric switch occur (see detail). Chalk trough varies in height above floor from 2′ to 3′, dependent upon grade.

Kindergarten.—Separate entrance and vestibule provided in addition to door into general hall. Room has own drinking-fountain and toilet; exterior wall space almost entirely filled with windows; open fireplace; seats in bay have either cupboards under or radiators behind.

House Lockers.—Where lockers are in corridors the plaster above is furred out to be on same face; drinking-fountain recessed (see detail); hose reel brought out to same face as lockers. Where lockers are in alcoves off corridors, windows are spaced to conform to 4′ aisles separating lockers. Lockers are 12″ x 12″ in plan and 5′ in height above a 6″ cement base. (A "house" locker is that used for the pupil's personal effects, as contrasted with a gymnasium locker.

In the boys' toilet-rooms it has been found that keeping the urinal fixtures separated by an appreciable space makes for cleanliness

Where lockers are located in corridors the partitions are furred out over the lockers to avoid the dust-catching top

FROM THE WORK OF GUILBERT & BETELLE, ARCHITECTS

This is the seventh in a series of measured drawings by Mr. Geerlings, of which the subjects chosen are among those occurring in modern practice. The intention has been to select the best available solutions of problems that are likely to be troublesome to the architect who has not met similar ones before, and to reproduce these painstakingly, with photographs and helpful data.

Subjects that have already appeared are: A Shop-Front Show-Window (Starrett & Van Vleck, Architects), November, 1926; Interior Details of a Fifth Avenue Shop (Starrett & Van Vleck, Architects), December, 1926; Teller's Cage and Bank Screen (York & Sawyer, Architects), January, 1927; Apartment-House Details (McKim, Mead & White, and James C. Mackenzie, Jr., Architects), February, 1927; Hotel Office Details (Geo. B. Post & Sons, Architects), March, 1927; Cigar-Stand, Hotel Roosevelt, New York (Geo. B. Post & Sons, Architects), April, 1927. The next drawing will cover some further details of school construction from the work of Guilbert & Betelle, Architects. Suggestions as to further subjects desired are welcomed.

The Old Fort at Saint Augustine

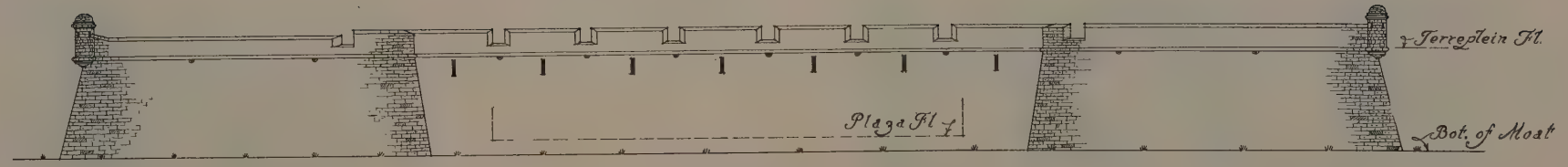
WITH MEASURED DRAWINGS BY DANIEL W. WEINY

Part II (Conclusion)

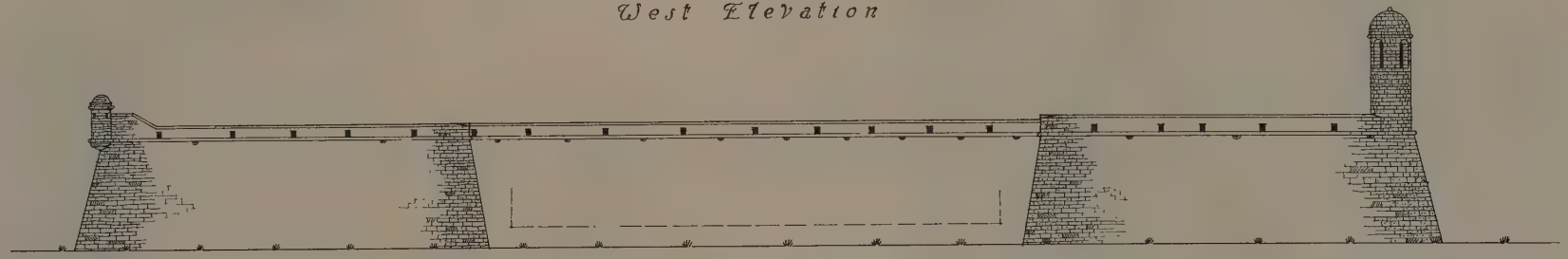
FURTHER details from one of America's first architectural monuments, built 1595–1690, under the initial direction of Captain Don Pedro de Brazas y Garay in accordance with plans brought from Spain by Hernando de Mestas. It was first called "San Marco Castle," which name held until the United States Government renamed it "Fort Marion" in honor of General Francis Marion.

The watch-tower and gun foundations

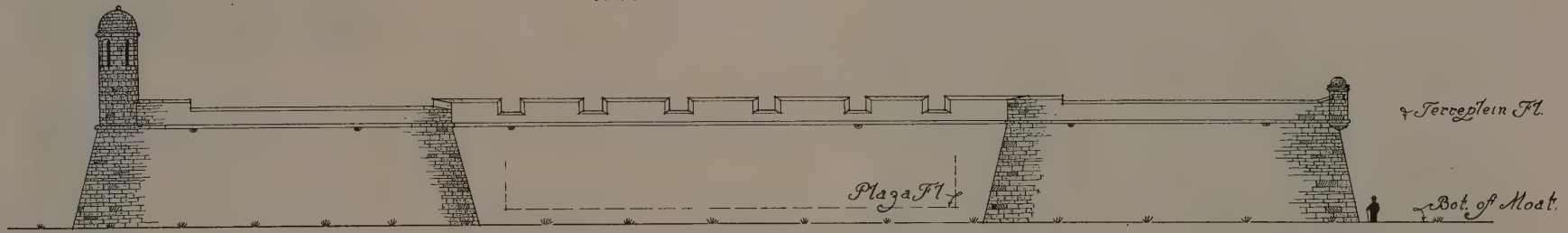
The hot-shot oven behind the guns



West Elevation



East Elevation



North Elevation

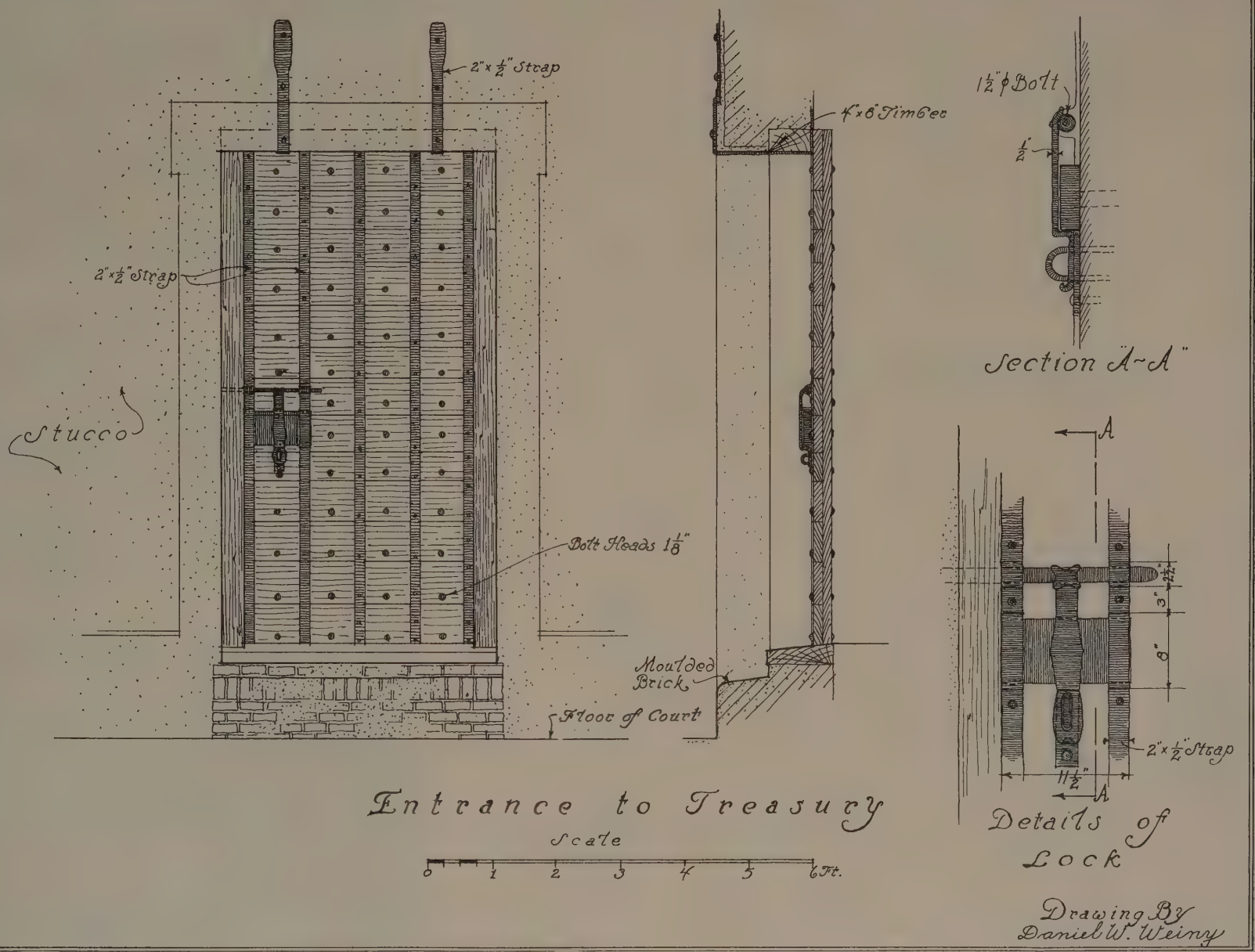
South Elevation

Scale

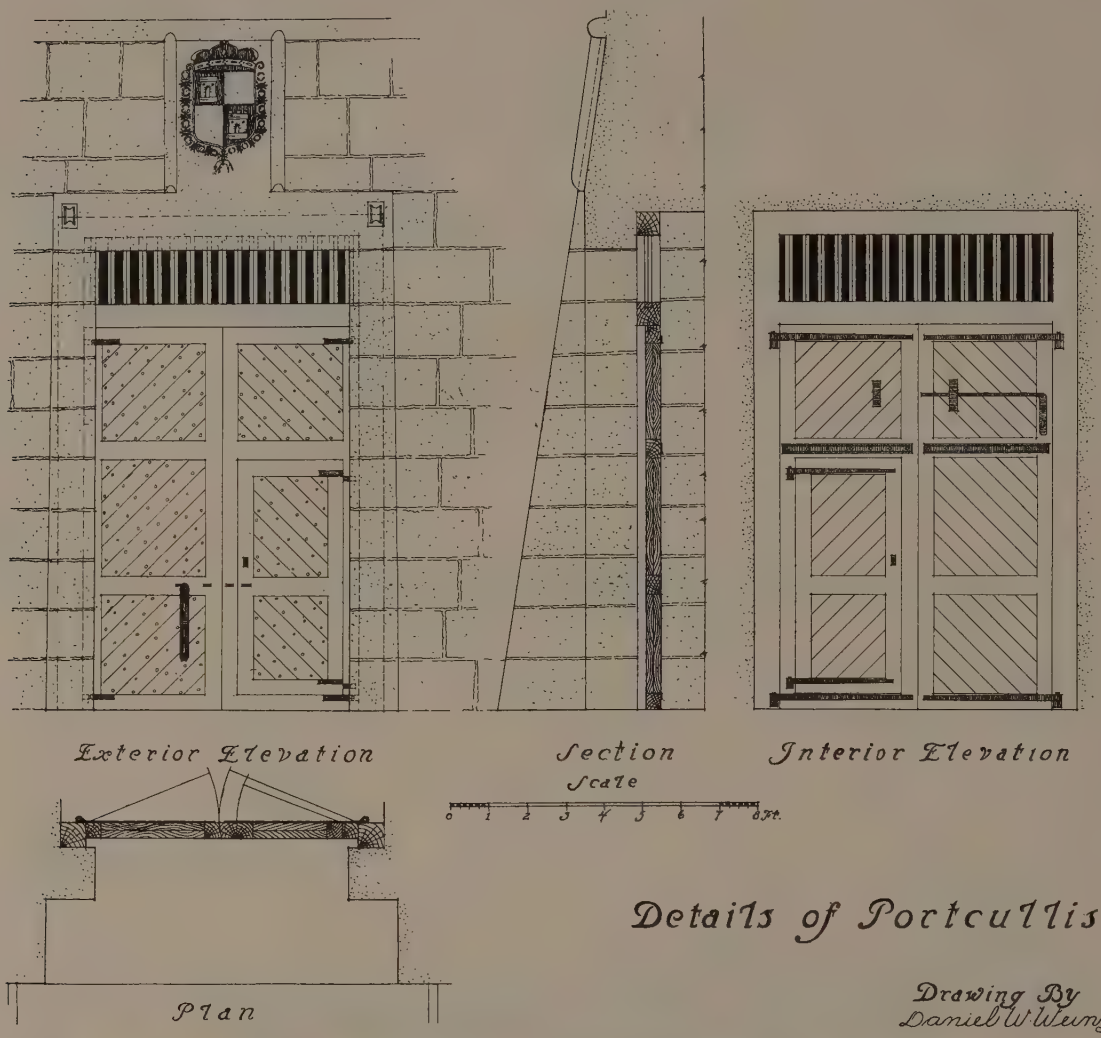
0 10 20 30 40 50 60 70 80 90 100 Ft

THE OLD FORT AT SAINT AUGUSTINE

DRAWN BY DANIEL W. WEINY



THE OLD FORT AT SAINT AUGUSTINE

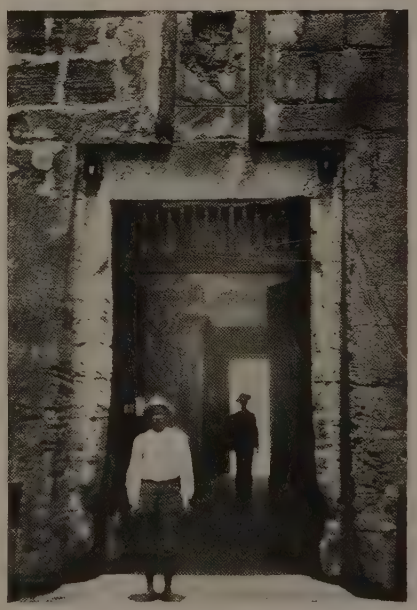


Details of Portcullis

Drawing By
Daniel W. Feeny

Doorway to chapel from the Plaza

Watch-tower in the bastion of Saint Paul



The portcullis (details shown above)

EDITORIAL COMMENT

VOL. LV, No. 5 ARCHITECTURE MAY, 1927

THE GREAT EPIDEMIC

IN the ten years since the World War, America has lost more lives through fire than she lost in the war itself. In that same ten years we have had destroyed by fire the equivalent of two-thirds the national wealth of Belgium. And the worst of it is that this enormous waste is increasing rather than being brought under control. It is estimated that 90 per cent of all our fires are easily preventable and the remaining 10 per cent controllable.

Propaganda looking toward the checking of this national waste has long been carried on by various agencies, but the National Fire Protection Association now purposes a campaign of eradication on an extensive scale. The association is a non-commercial organization, independent of all special interests, seeking to co-ordinate the efforts of all fire-protection agencies. It is about to raise a very modest fund of half a million dollars for the eradication of this scourge by the same scientific and systematic methods that we employ in ridding the earth of disease plagues. It is planned to have ten skilled engineers in fire prevention devote all their energies for the next five years to directing the fight against fire. They will act as a mobile field-force, operating wherever the great scourge happens to be meeting with least resistance. Preliminary experimental work and long study of causes by the association convince the business leaders in charge of the movement that fire losses can be cut from 25 to 50 per cent within five years. Every citizen has a real financial stake in fire-prevention work—to put the matter on the lowest material basis. Insurance rates are determined not so much by our own care or negligence as by the care or negligence of others. Fire-prevention work, therefore, must be carried on as a nation-wide enterprise. The recognition of this fact and our national ability to accomplish the thing that should be accomplished make the success of this great effort a foregone conclusion.

AN ARCHITECTURAL AUTOPSY

ON May 1, 1892, there was opened for occupancy in the Chicago loop district the W. C. T. U. Temple, designed by Burnham & Root, Architects, and considered in its day one of the finest skyscrapers in the country. In August, 1926, this building was torn down to make way for the new State Bank Building. Through the efforts of the National Association of Building Owners and Managers, and with the co-operation of the owners and wrecking company an unusually careful and comprehensive survey was made of the old building, particularly with regard to the manner in which obsolescence manifests itself throughout the physical construction, equipment, and design of an office-building.

A factor which in many cases might be dominant in effecting obsolescence—the shifting of the business district—was not present in this case; in fact, the location grew enormously in value. Another factor—the loss of light and air through the erection of neighboring high buildings—was also by chance negligible in this case. This survey, therefore, presents a particularly striking example of what obsolescence is and does, on the physical side—how a modern building deteriorates and to what extent it loses value by being behind the times.

A detailed report of the survey, published by the association, contains many findings that are of great interest. Upon these there is no space here to dwell. In a summary, however, "the study of the Temple Building indicates that an office-structure of the most modern design, most permanent type of construction, and most advantageous location, may be so affected by obsolescence within a period of thirty-five years that its demolition becomes an economic necessity."

PAYMENT DEFERRED MAKETH A SALE

AN enterprising builder of small suburban dwellings has hit upon a new way of securing on the dotted line the name of the future owner, so-called. In the basement garage stands a new car, gas-tank filled, ready to drive out. Payment therefor is unobtrusively provided in the terms of the second mortgage. The next thing we know the profession will be told that architectural fees will be paid by the second generation, if any.

JAIL, WHERE IS THY VICTORY?

THE triumph of architecture over the traditional atmosphere of jail is thrillingly told in a recently published description in the New York *Herald-Tribune* of Jersey City's new police-station and criminal court building, which is said to have "a motif as well as a purpose."

"The interior of the structure is done in the best late Metro-Goldwyn, with delicate cream walls, tropical blue shades, bronze and gold lighting fixtures, terrazzo floors, and chaste but emphatic ornament. Its elevator is a green bronze affair which runs directly from the jail block on the top floor, to a fifty-car garage in the basement where guests may park their automobiles.

"The cell-doors slide on roller-bearings and are cushioned against any unseemly noise. Instead of the harsh glint of polished steel, the bars have been "pickled" to give an antique effect. Each cell is equipped with a bath and shower, and the only convenience lacking will be a bell-boy to bring ice-water and other liquids."

ANNOUNCEMENTS

A Chapter of the American Institute of Architects has been formed in Hawaii, it is announced by Milton B. Medary, Jr., Philadelphia, president of the Institute. The charter was granted as a result of a petition signed by Hart Wood, C. W. Dickey, W. L. Emory, M. H. Webb, Ralph A. Fishbourne and Edwin C. Pettit.

Hawaiian architects have previously been members of the San Francisco Chapter. The Institute now embraces fifty-seven chapters, with a membership of 3,000.

Courses in architecture are to be given in the Summer Session this year at the Carnegie Institute of Technology in Pittsburgh. The Department of Architecture of the College of Fine Arts will give intensive six weeks' courses from June 13 to July 23 to meet the needs of students who desire to continue their work in architecture in the vacation, whether to make up credit, obtain advanced credit, or to prepare themselves better for entrance.

The College of Architecture of the University of Michigan will again conduct classes in architectural design and outdoor drawing and painting during the coming summer. The classes will run from June 27 to August 19.

The United States Civil Service Commission announces the following open competitive examination: Associate Architect, $3,000; Assistant Architect, $2,400. Applications for associate and assistant architects will be rated as received at Washington, D. C., until June 30. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of United States Civil Service examiners at the post-office or custom house in any city.

The Architectural League of New York, at 215 West 57th Street, has organized a bureau for the registration of draftsmen seeking positions. Complete data concerning education, practical experience, references, salary desired, etc., will be on file. A letter of inquiry addressed to Miss A. M. Simpson, Assistant Secretary, or a phone call, Circle 2837, will receive prompt attention.

Colton & Knecht, architects, announce the change of their address to 724 Grand Rapids National Bank Building, Grand Rapids, Mich.

Harold Parker, A. I. A. announces his withdrawal from the firm of Millott and Parker, architects, and the opening of his offices in The Feick Building, Sandusky, Ohio, for the practice of architecture. Manufacturers' catalogues requested.

Mr. Nathan Myers, Mr. Frederic Bigelow, and Mr. Joseph Sanford Shanley announce that they have associated themselves under the firm name of Myers, Bigelow & Shanley for the general practice of architecture, with offices at 24 Walnut St., Newark, N. J.

Sloan & Robertson, architects, have removed their offices to occupy the thirty-first floor of the Graybar Building, 420 Lexington Ave., New York.

Mr. Hal F. Hentz and Mr. Rudolph S. Adler announce that they have formed a partnership with Mr. Phil Shutze for the practice of architecture under the firm name of Hentz, Adler & Shutze, successors to Hentz, Reid & Adler, Candler Building, Atlanta, Ga.

Samuel A. Lieberson, architect, announces the establishment of an office at 113 West 42d St., New York.

T. John Folks, architect, wishes to announce that he has terminated his partnership with F. J. Schwarz, architect, 1136 Woolworth Bldg., New York City, and has opened an office in the Fabian Theatre Building, Paterson, N. J., where he will continue the practice of architecture as a specialist in Catholic Church and School Work. Manufacturers' and dealers' catalogues and samples requested.

BOOK REVIEWS

THE SPANISH HOUSE FOR AMERICA. By Rexford Newcomb, A.I.A. 164 pages, 6¾ by 10 inches. Many illustrations from photographs and plans; frontispiece in color. Philadelphia: 1927: J. B. Lippincott Co. $3.50.

A book that makes clear to the layman the essential elements and decorative details of the Spanish house in its modern adaptation to American country-house needs. In the present popularity of the style, the book should serve a real need in the enlightenment of the prospective home builder.

THEORY AND ELEMENTS OF ARCHITECTURE. Vol. I, Part I. By Robert Atkinson, F.R.I.B.A., and Hope Bagenal, A.R.I.B.A. 402 pages, 7¼ by 9¾ inches. Many illustrations. Printed in England. New York: 1926: Robert M. McBride & Co. $10.

Mr. Atkinson is Director of Education, Architectural Association Schools; his co-author, Librarian of the Association. The title of the book is a good description of it, but it differs from other works of the class by its major emphasis on materials rather than on historic form—with what success in teaching it is difficult for us in this country to judge. The present volume is to be followed by one on the Orders and other details of architectural vocabulary, one on the development of Planning, and one on Planning of Modern Building Types.

THE PRACTICAL DECORATION OF FURNITURE. Vol. I: "Veneering, Inlay or Marqueterie, Gilding, Painting." By H. P. Shapland, A.R.I.B.A., editor of *The Cabinet Maker*. 44 pages and 48 plates from photographs, 8¾ by 11 inches. Printed in England. New York: Payson & Clarke, Ltd. $5.

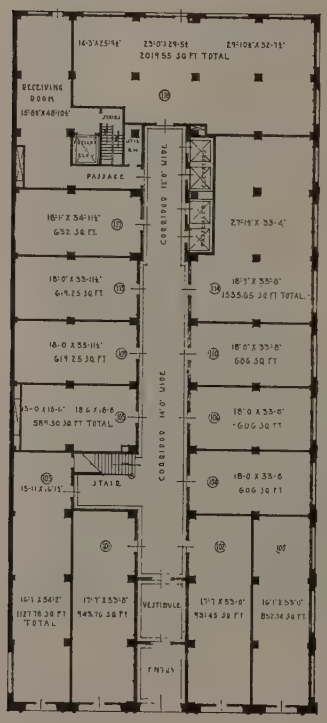
The first of a series of three books: Vol. II is to cover Moulding, Pierced Work, Turned Work, and Carving; Vol. III, Applied Metalwork, Covering with Leather and Textiles, Lacquering, and Miscellaneous Decoration. The series of excellent illustrations from museum pieces is prefaced by text descriptive of technic past and present.

CHAMBER OF COMMERCE BUILDING, INDIANAPOLIS, IND.

ROBERT FROST DAGGETT; THOMAS HIBBEN, ASSOCIATED ARCHITECTS

Entrance Detail

Main Corridor

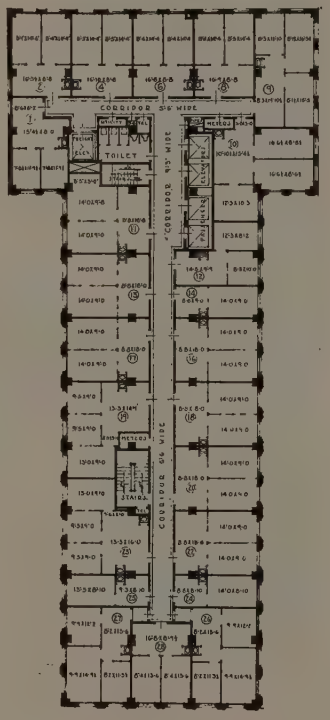


Plan of
First Floor

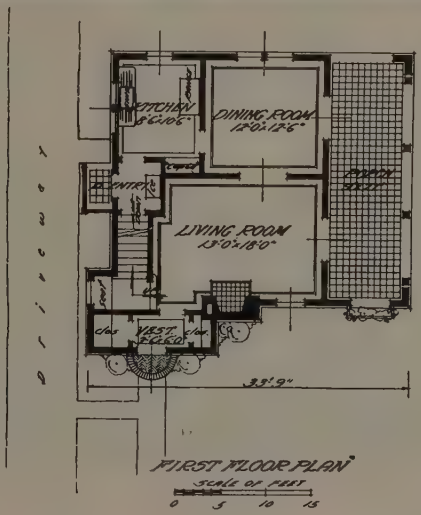
Chamber of Commerce Building

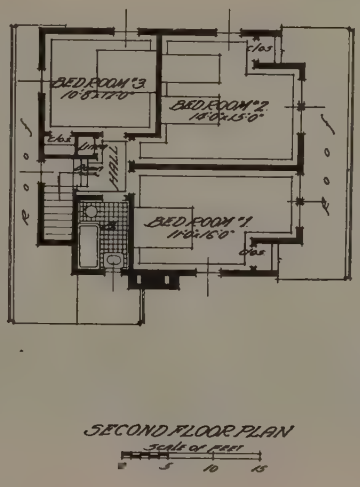
Indianapolis
Ind.

ROBERT FROST DAGGETT
THOMAS HIBBEN
ASSOCIATED ARCHITECTS



Typical
Floor Plan





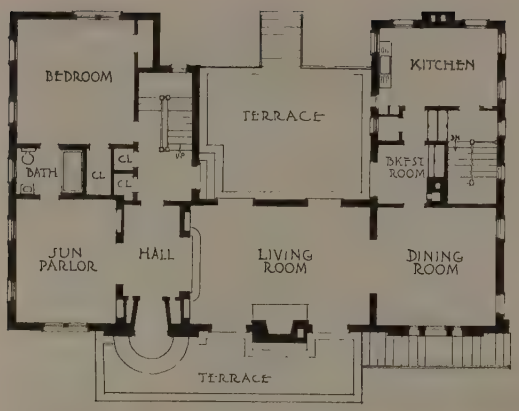
A House at Rockville Center, Long Island

R. C. HUNTER & BRO., ARCHITECTS

A HOUSE AT ROCKVILLE CENTER, LONG ISLAND

R. C. HUNTER & BRO., ARCHITECTS

House of T. H. Benners, Jr., Birmingham, Ala. WARREN, KNIGHT & DAVIS, ARCHITECTS



HOUSE OF
T. H. BENNERS,
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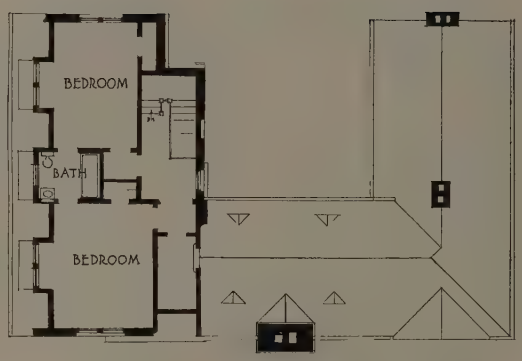
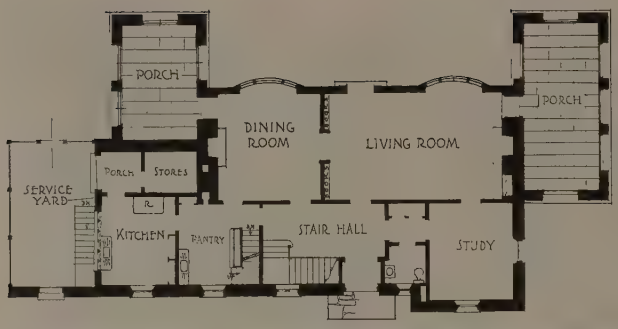
BIRMINGHAM,
ALA.

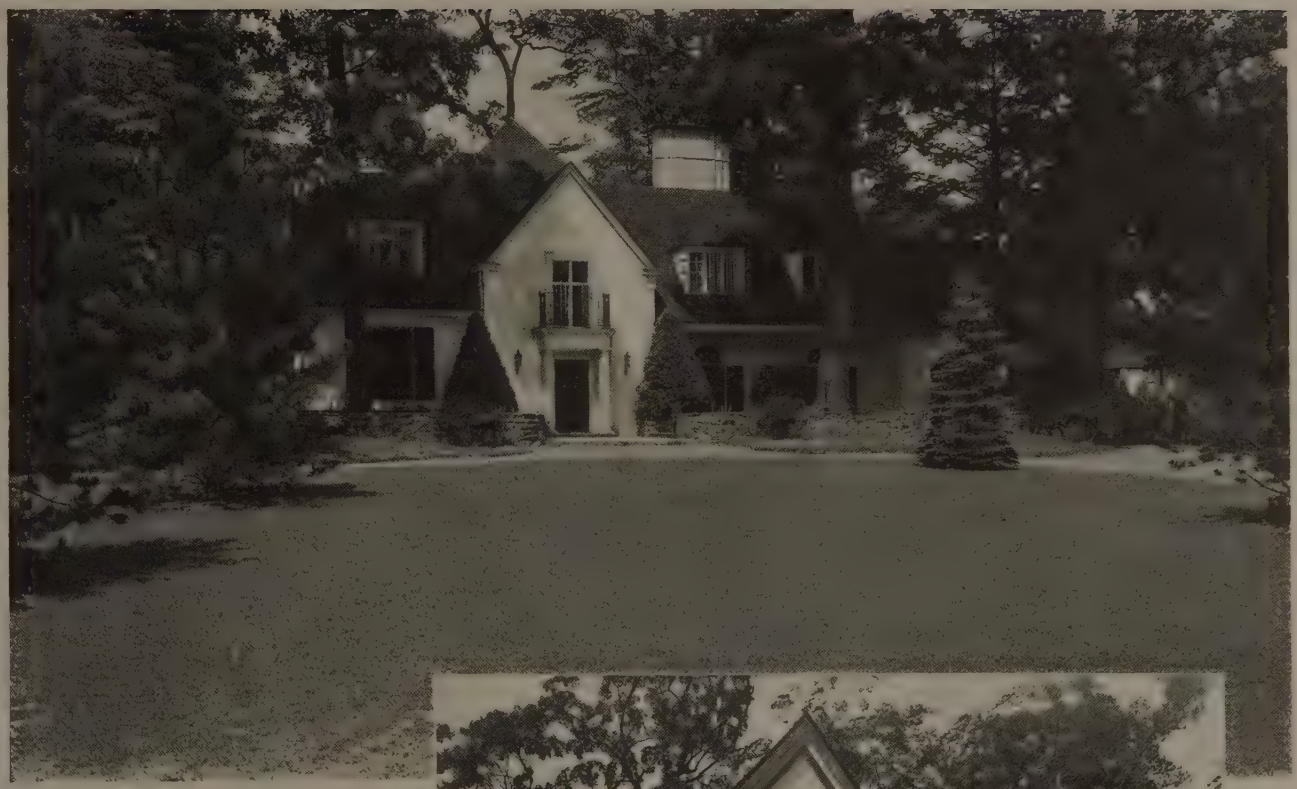
WARREN,
KNIGHT
& DAVIS,
ARCHITECTS



House of L. K. Mallinckrodt, Guilford, Baltimore, Md. EDWARD J. PALMER, ARCHITECT



House of L. K. Mallinckrodt, Guilford, Baltimore, Md. EDWARD J. PALMER, ARCHITECT



House of
R. T. Wilken
Bronxville,
N. Y.

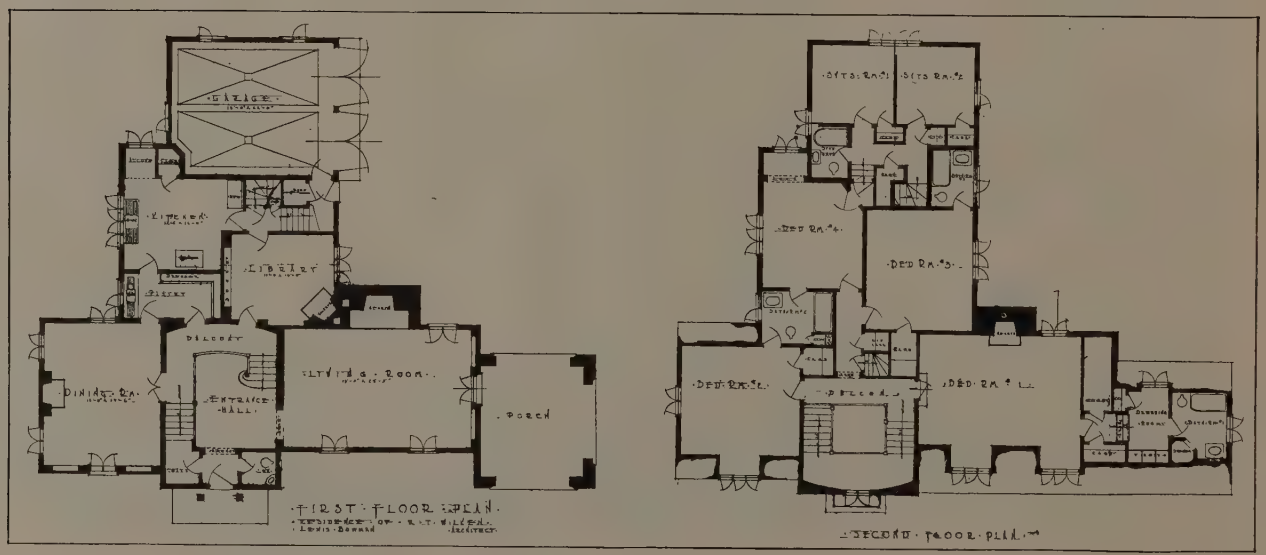
LEWIS BOWMAN, ARCHITECT

The Entrance-Hall

Fireplace in Living-Room

HOUSE OF R. T. WILKEN, BRONXVILLE, N. Y.

LEWIS BOWMAN, ARCHITECT



From a Lithograph by Robert Ball

Birch Burdette Long—*A Tribute*

Born
May 27
1877

Died
March 1
1927

GENTLE, modest, lovable soul, whose broad tolerance was a part of the kindliness that was in the very fibre of him and governed all his ways. Endowed with a fine sense of humor, he was always serious about the work that ultimately took him from us—because his professional life was a long and almost unbroken series of terrific demands upon a vitality that, however extraordinary, could not but yield at last. For he kept his promises and never let a man down—never complained about the delays of others that so often threw a fearful strain upon him at the last hour; "we'll get through somehow" he would say, and work night and day until the finish.

But he found time to help others; that was a part of his quiet creed; out of an income that never could be very large and was subject to the fluctuations and vicissitudes that beset the practice of the men for whom he made his beautiful drawings, he could spare something for prizes "to help the young fellows." He was always helping some one in some way. He was generous too, in his praise of fellow artists in his own chosen and somewhat crowded field; never a breath of jealousy; never a bit of pique when for one or another reason an old client went to one of them instead of to him. "That was a peach Blank made for you"—that was his attitude. A good sportsman.

For twenty-four years he annually gave up his precious time to the hanging of the exhibitions of the Architectural League; many of them he hung single-handed. And when memory ranges back over those years and recalls the character and quality of the shows he arranged, and that slight, almost frail little figure, patiently and indefatigably moving about, working not for himself but for others and for the art he loved so much, we cannot realize that Birch will never be there again—it just doesn't seem possible.

Only five days before his death some of his friends gave him a loving cup in token of their affection and admiration. It made him very happy—touchingly happy—and every man of them is grateful for the privilege of being there and that through some one's thoughtfulness our friend had that happy hour, shed those happy tears, and caught a glimpse of the love we bore him and shall bear him always.

H. Van Buren Magonigle

The Architectural Clinic

WINDOW SPANDRELS

EVERY architect knows how simple it is on an early sketch of a high office-building to indicate a becoming set of verticals, these being composed of windows with intervening spandrels and indicated with a few deft, broad strokes of a soft pencil. Without a murmur they blend into an uninterrupted, unquestioning unit from top to bottom.

Every architect knows, too, how difficult is the problem of creating a spandrel which will look enough like a window so that there may be a continuity of color effect. Appreciating the fact that there is no text-book data on the subject of materials best suited for spandrel usage, we have written to several prominent architects requesting them to share with the profession the benefit of their experience. We are indebted to Messrs. Raymond Hood and Harvey Wiley Corbett for their memoranda on the subject.

Mr. Hood has confronted the spandrel problem in both the American Radiator Building, New York City, and the Tribune Tower, Chicago, in neither case with piers sufficiently deep "to properly accentuate the lines, a condition that is true of nearly every office-building. In the Tribune Tower," continues Mr. Hood, "we were using a gray stone and finally decided on making the spandrels entirely of lead, which has an almost atmospheric blue-gray quality of color that makes it tie in with a line of windows. The latter are varying in tone, depending on the reflections, color, shape, and size of the room behind, and whether or not the window is open.

"The Radiator Building was of course quite a different problem, on account of using a dull, black brick for the mass of the building. We could not have lighter-colored or smooth-textured spandrels, because the entire impression of the building would have been reversed; that is, the lines of windows would have advanced beyond the faces of the piers. So we used the same brick in the spandrels as in the body of the building—in other words, as dark a brick as we could get. At one time we considered oiling the brick to make it darker, but we feared that the oil would have invited the dust and, instead of becoming darker, the spandrels would actually have become lighter by taking on the gray color of dust. But most important in working out the vertical impression, I believe, was the choice of the window-shades. We tried all colors, varying from buffs to blacks, eventually deciding on a very dark gray-green that was intermediate in tone between the black spandrel and the average tone and color of the windows under varying conditions."

In the American Radiator Building the black brick extends across the spandrels. Gray-green window-shades were used after considerable experimenting with many colors

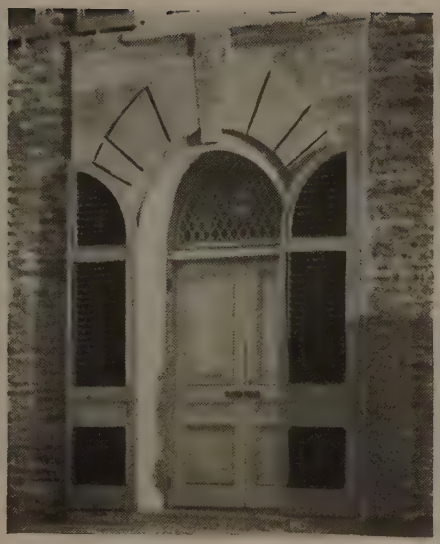
In the Tribune Tower, Chicago, the verticality of the window lines was accentuated by making the spandrels entirely of lead, which has an atmospheric blue-gray quality of color

WE have Mr. Corbett's opinion that "the solution of the problem of spandrels in tall buildings where the vertical expression is sought lies in the use of a darker material than the piers or adjoining wall surfaces. If the spandrel is brick, it may, of course, be of the same tone as the field brick, but darkened by the use of patterning of one sort or another, producing a texture through light and shade. Terra-cotta is sometimes used and may be very dark or colored. The dark spandrel, however, must be used with care. It is not suitable where the reveals are shallow, as the effect produced seems merely a series of strips. In this case, an all-over texture of brick wall and windows is better, and the darkened spandrel should be reserved for use in deep-set piers or reveals."

The problem of selecting the best material for window spandrels as regards color, durability, economy, texture, etc., is one which is becoming more and more of a factor in the appearance of our buildings as they continue upward. As time passes, there will be new discoveries and new effects; in fact, even since the buildings mentioned above, there have been spandrels of terra-cotta in cast-iron frames, glazed and unglazed tile in frames, painted cast-iron panels, along with other combinations. Some one has advocated black glass, or glazing over a shallow void.

What has been your experience and what are your recommendations?

ALFRED HOPKINS



EDMUND B. GILCHRIST

JOHN MEAD HOWELLS

ALBRO & LINDEBERG

Fanlights
and other
Overdoor Treatments

SEVENTH IN A SERIES OF PORTFOLIOS. OTHER SUBJECTS UPON WHICH MATERIAL IS BEING COLLECTED FOR EARLY PUBLICATION ARE: IRON RAILINGS, PALLADIAN WINDOWS, BOOKSHELVES, COLONIAL BALUSTRADES, DOOR HARDWARE, ETC.

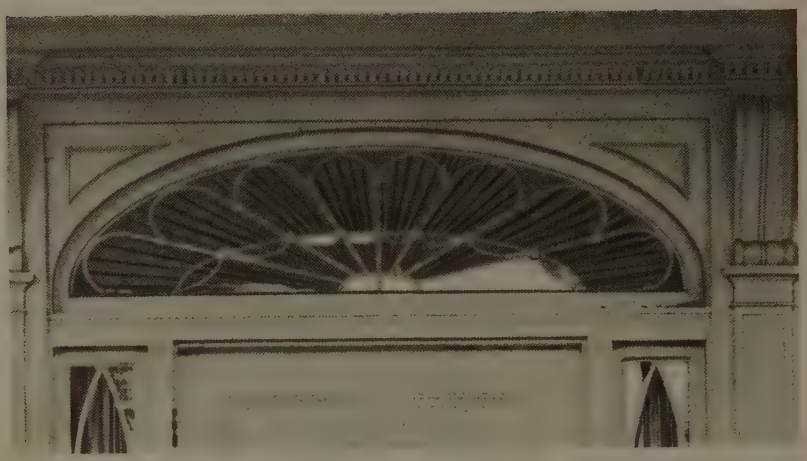
GAY & PROCTOR

ERNEST SIBLEY & JOHN J. FERRY

DELANO & ALDRICH

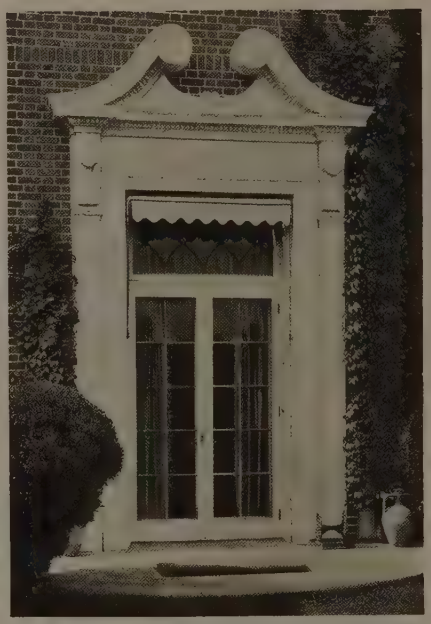
PEARE & QUINER

ALBERT KAHN, INC.



MODERN, NEW ENGLAND

OLD, PHILADELPHIA



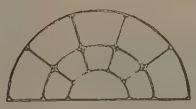
DELANO & ALDRICH

EGERTON SWARTWOUT

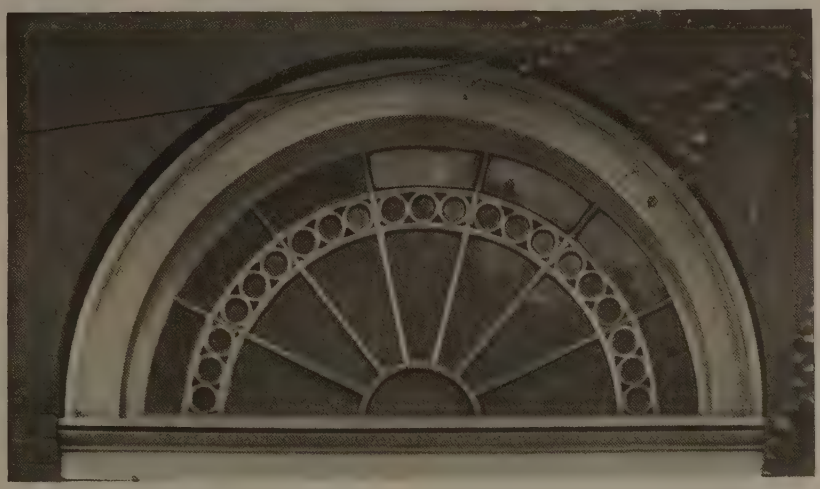
OLD, MAINE

OLD, NEW CASTLE, DEL.

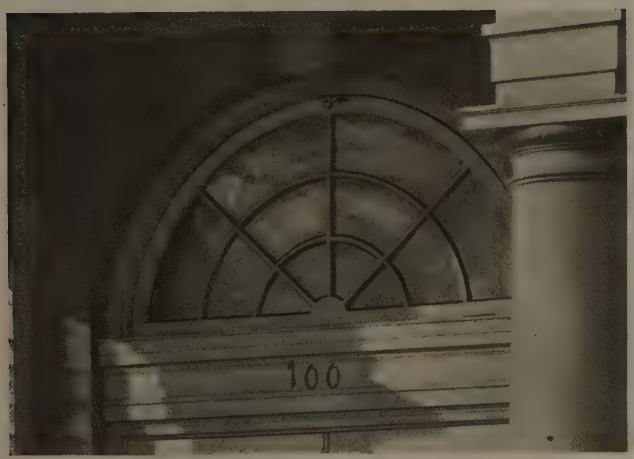
CROSS & CROSS



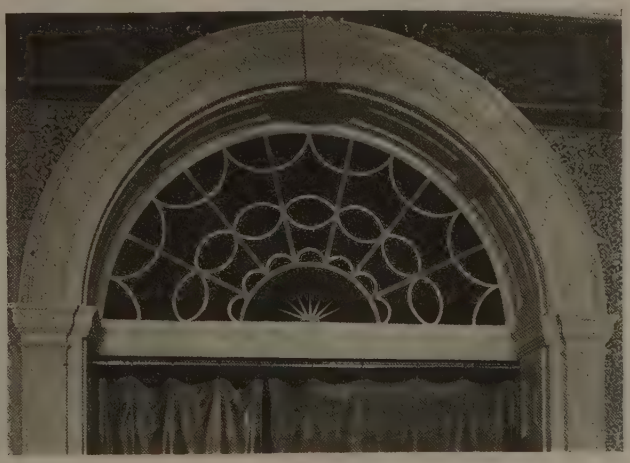
HEATHCOTE M. WOOLSEY



OLD, PHILADELPHIA



WARREN, KNIGHT & DAVIS



READ HOUSE, NEW CASTLE, DEL.

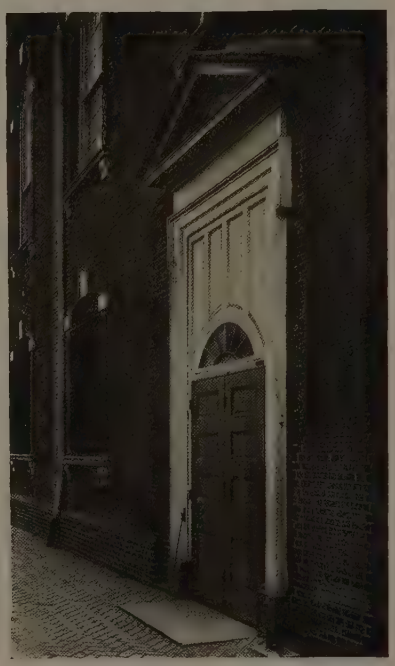
McGUIRE & SHOOK

VREELAND HOUSE, NEW JERSEY, 1818

JOHN H. PHILLIPS

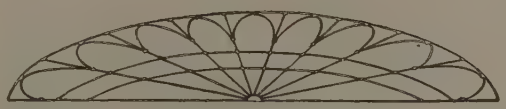
PEABODY, WILSON & BROWN

MEYER & MATHIEU

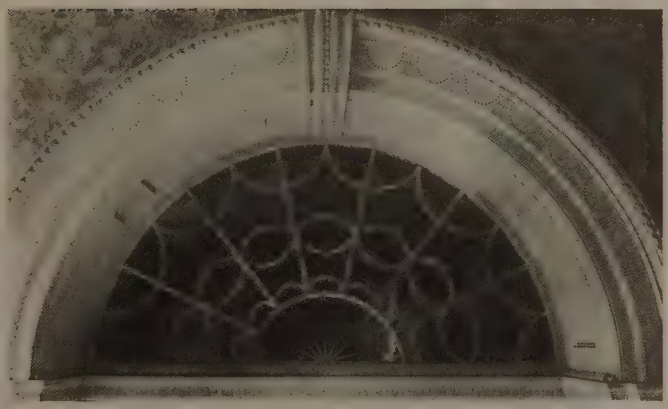


OLD ST. PETER'S, PHILADELPHIA, 1761

SOUTHAMPTON, LONG ISLAND

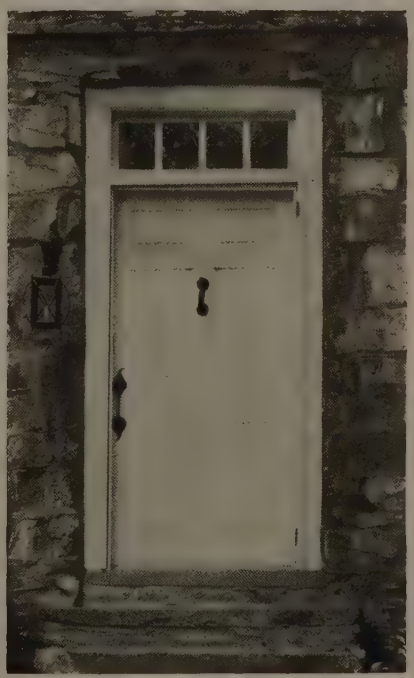


OLD, NEW CASTLE, DEL.



READ HOUSE, NEW CASTLE, DEL.

OLD, GERMANTOWN, PA.



G. E. BRUMBAUGH

OLD, NEAR POTTSTOWN, PA.

OLD, SALEM, N. J.

DELANO & ALDRICH

DWIGHT JAMES BAUM

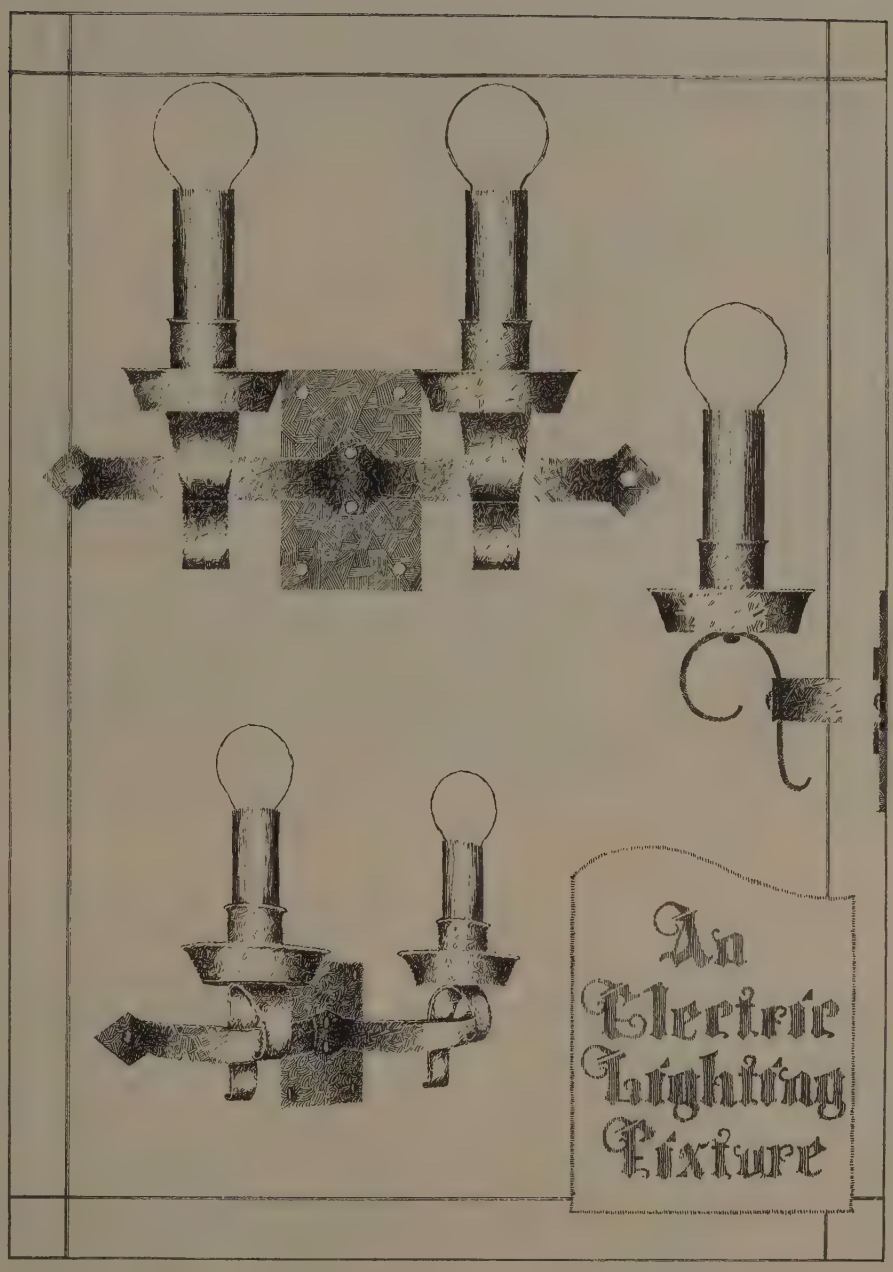
JAS. WM. O'CONNOR ©AMEMYA

JOHNSON, MILLER, MILLER & YEAGER

AMSTEL HOUSE, NEW CASTLE, DEL.

OLD, NEW CASTLE, DEL.

MT. PLEASANT, PHILADELPHIA



Design Awarded First Prize

By George M. Syversen, Chicago

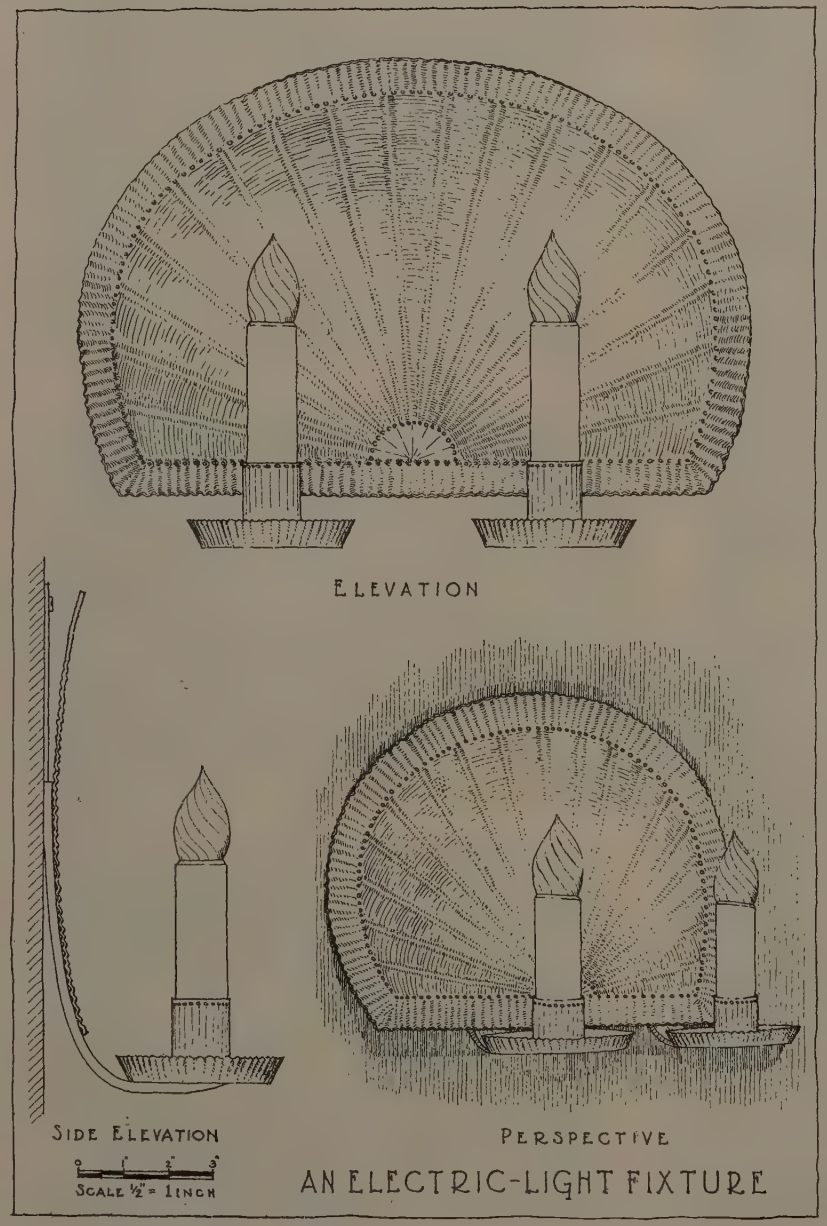
Architecture's Competition I—Report of the Judges

THE judges take pleasure in awarding the prizes for Architecture's Competition I to the following:

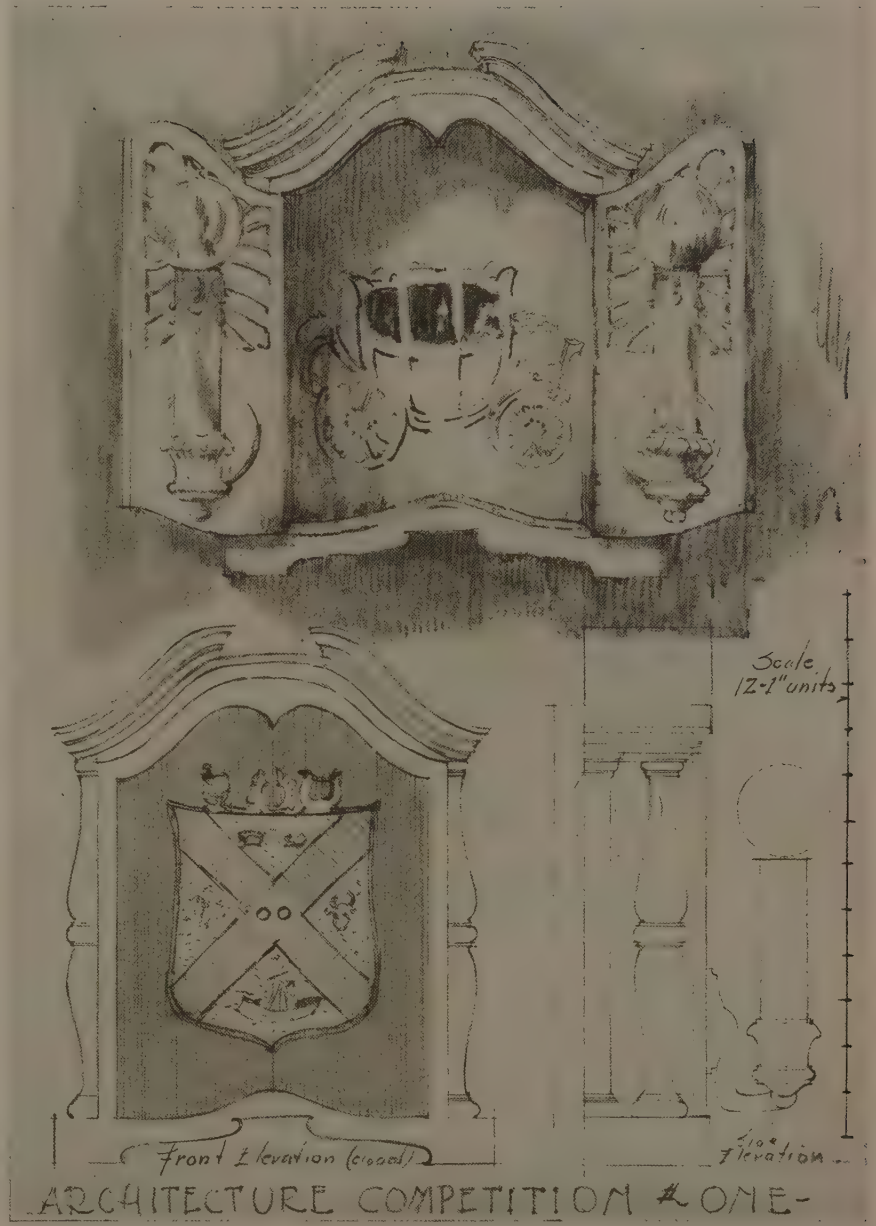
First prize, George M. Syversen, Chicago, Ill.; Second prize, Irving B. Parsons, Kansas City, Mo.; Third prize, G. E. McDonald, Jr., Columbus, Ohio; Fourth Prize, Frances Galey Miller, New York City; Fifth Prize, George F. Spinti, III, Milwaukee, Wis.

The judges have no wish to make these competitions a series of strict archæological problems. They do feel, however, that it is incumbent upon the contestants to familiarize themselves with the style and period specified in each case, giving to the design itself thereafter as free an interpretation as they may choose.

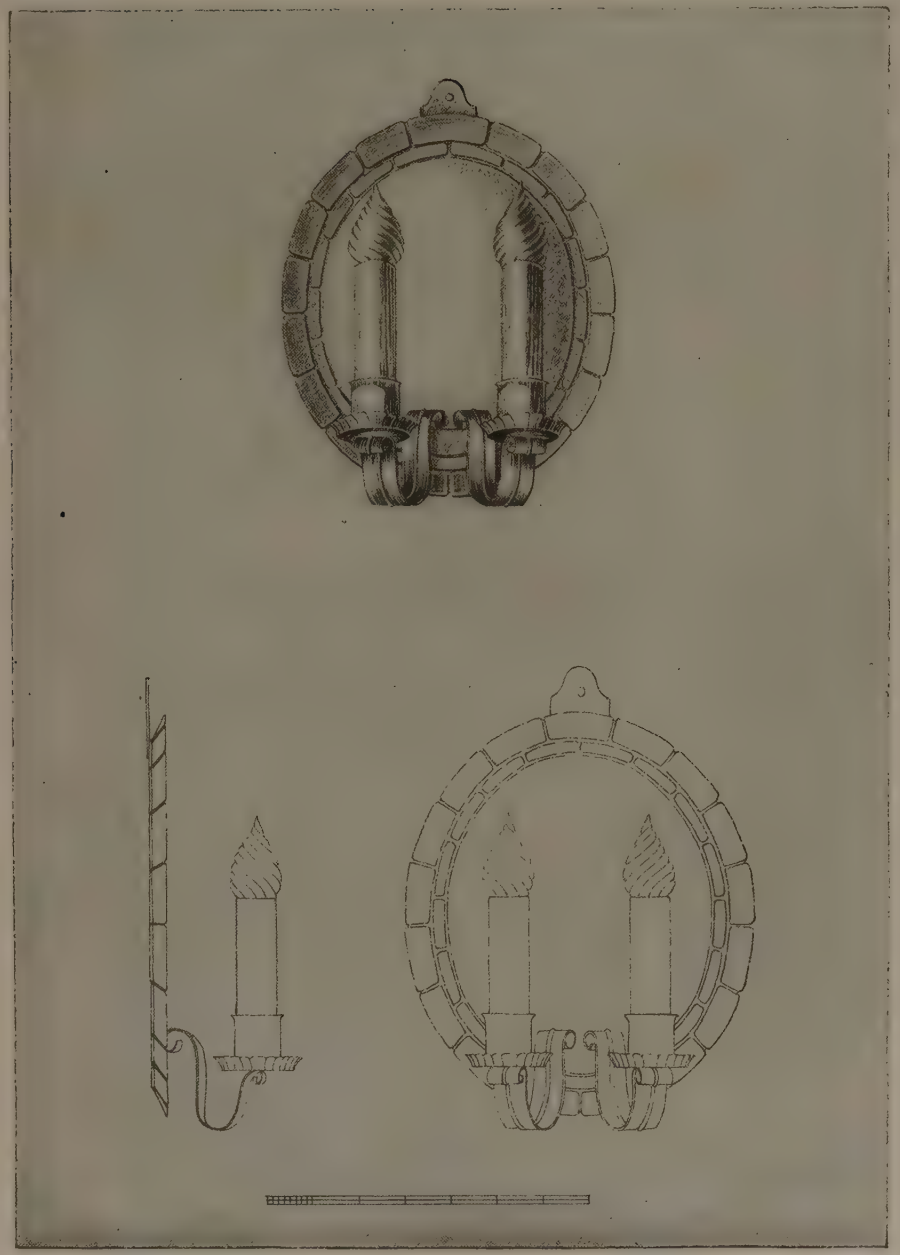
It is important also to bear carefully in mind the detailed provisions of the programme. For example, the designs awarded the fourth and fifth prizes, although they show two lights as called for, give the impression of being one-light fixtures in essence, stretched out horizontally to provide space for two outlets. The design placed third, while somewhat puzzling as to the reason for the coach motif, shows an ingenuity that merits recognition.



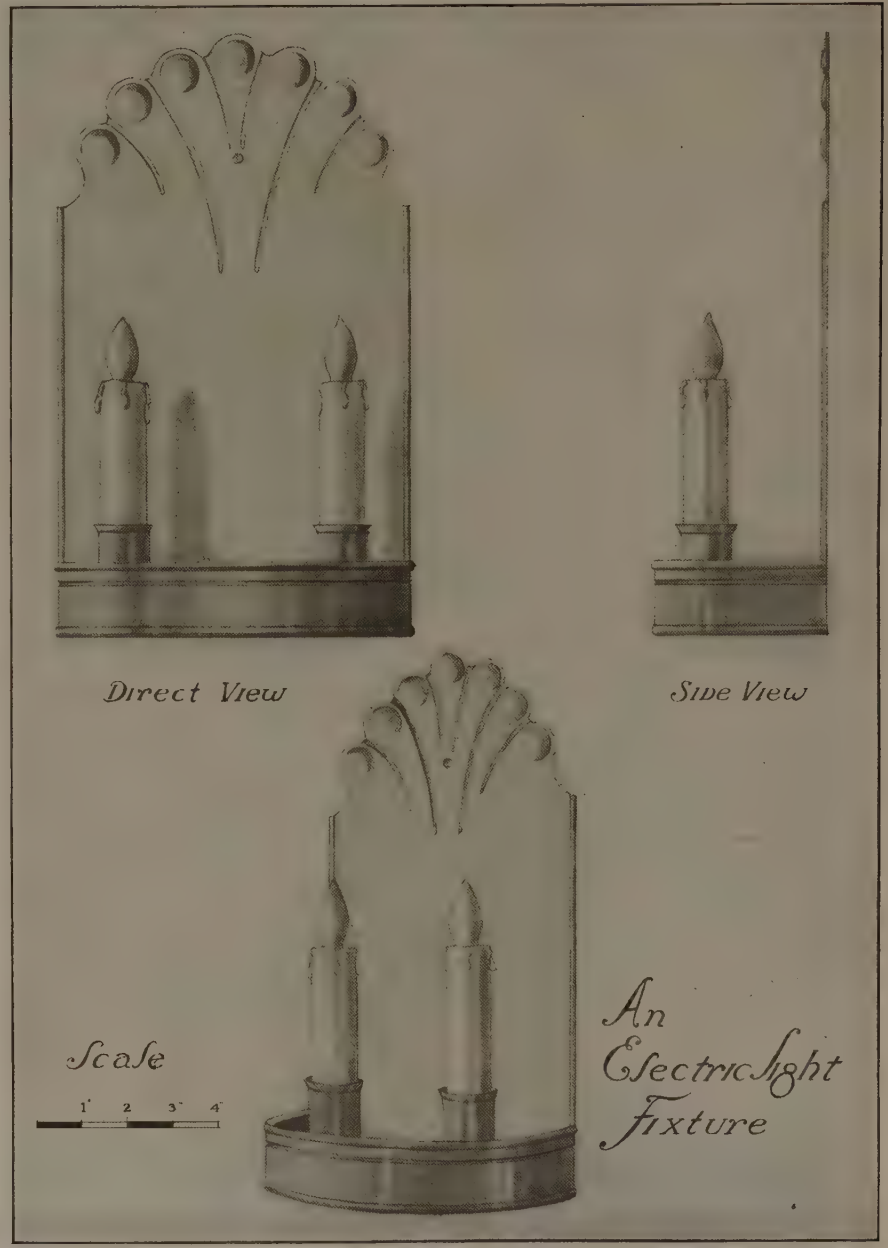
SECOND-PRIZE DESIGN BY IRVING B. PARSONS, KANSAS CITY, MO.



THIRD-PRIZE DESIGN BY G. E. MCDONALD, JR., COLUMBUS, OHIO



Fourth-Prize Design — By Frances Galey Miller, New York



Fifth-Prize Design — By George F. Spinti, III, Milwaukee, Wis.

ARCHITECTURE'S COMPETITIONS

AS this issue appears, the second of the series of competitions is closing. This month we announce the first awards, and reproduce some of the designs for the electric-light fixture competition.

In the general conditions, reprinted below, will be found mention of the medals it is planned to award at the end of the twelfth competition. It is particularly gratifying to ARCHITECTURE to be able to report that the Beaux-Arts Institute of Design has presented as one of its problems for the students in sculpture the task of designing this medal. The models submitted will have been judged at the Beaux-Arts Institute on March 14, and it is hoped that we may soon show in these pages the successful design.

GENERAL CONDITIONS

The Jury of Awards: H. Van Buren Magonigle, President, New York Chapter, A. I. A. Edmund S. Campbell, Dean, Beaux-Arts Institute of Design. Henry H. Saylor, Editor of ARCHITECTURE.

Compensation to Competitors: ARCHITECTURE will pay to the winners of each competition, immediately after receiving the jury's judgment, the following:

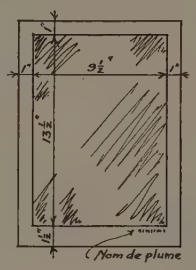
For Design placed	First	..	$150.00
" " "	Second	..	75.00
" " "	Third	...	30.00 in books*
" " "	Fourth	..	20.00 in books*
" " "	Fifth	...	10.00 in books*

* These to be chosen from the Art and Architectural Catalogue of Charles Scribner's Sons.

In addition to the above awards, which are made for each one of the monthly competitions, ARCHITECTURE will present three medals at the end of the twelfth competition, one of gold, one of silver, and one of bronze, to the three designs chosen from among the monthly winners which, in the opinion of the jury, show the greatest merit in design.

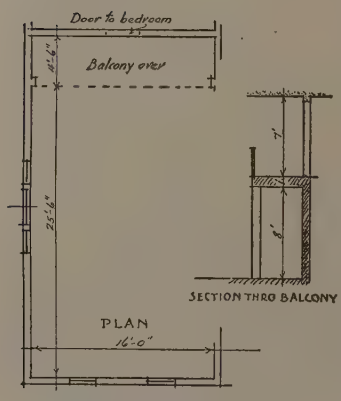
Eligibility: Architects and draftsmen are invited to enter one or all of these monthly competitions. It is *not* necessary that a competitor be a subscriber to ARCHITECTURE. A competitor may submit one or more designs in any of these competitions, but not more than one prize will be awarded to a competitor in each.

Requirements: One sheet (paper, not cardboard) only is required for the presentation of each design. It must be exactly of the size indicated in the sketch diagram herewith, the border margins left blank excepting for the nom de plume or other identifying device. The drawing may be in line or wash, or both, but if in wash it should be in monochrome, preferably in India ink. Indicate all scales graphically. To preserve the anonymity of drawings, each is to be signed with a nom de plume which is also written upon the outside of a blank white envelope containing the competitor's name and address. Drawings may be sent flat or rolled, and are to be addressed "ARCHITECTURE, Competition No. ——, 597 Fifth Ave., New York, N. Y." The closing times given below are for receipt of entries at the office of ARCHITECTURE, rather than the closing by postmark date—this being necessary in order that judgments can be made and published in the following issue of the magazine. No questions regarding the competitions can be answered, in justice to all.



Drawings awarded prizes become the property of ARCHITECTURE for publication and for any other use at the publishers' discretion. Other drawings will be returned to the senders only if postage is included.

Competitions III, IV, and V



Competition III. Closing June 1, 1927, at noon.

Subject: A small stairway leading from a studio to the owner's sleeping quarters above (see diagram). The style is that of the informal minor Italian villas. Show plan and one elevation at ⅜-inch scale, and details. Thumb-nail perspective may be included if desired.

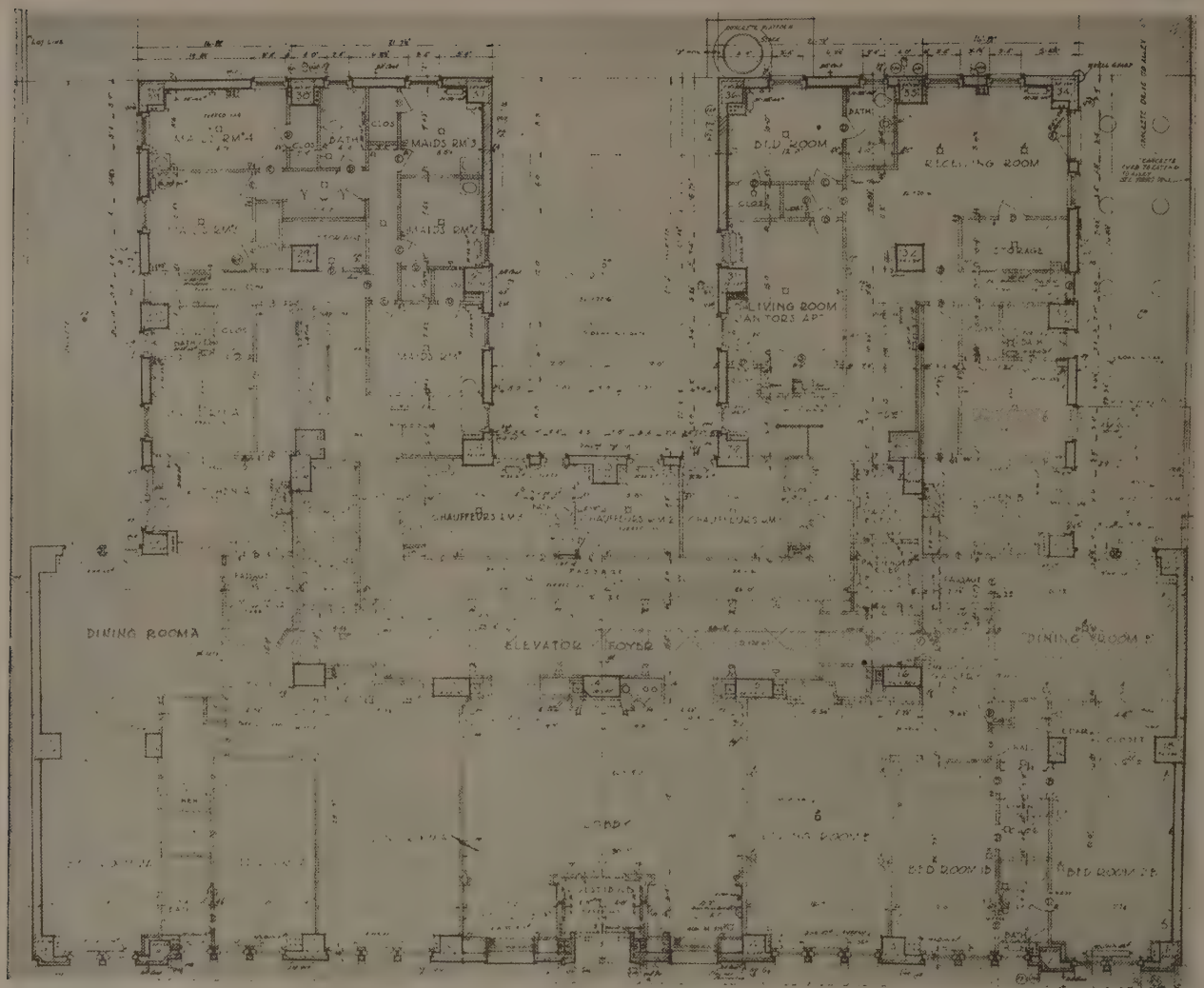
Competition IV. Closing July 1, 1927, at noon.

Subject: Wrought-iron hardware for the fitting and embellishment of a Dutch door for a house in the Dutch style of northern New Jersey. Door is 3 feet by 7 feet by 1¾ inches, without glass openings. Show exterior and interior elevations, plan and section, at ¾-inch scale; with important elements detailed at larger scale.

Competition V. Closing August 1, 1927.

Subject: A leaded-glass window in the library of an American gentleman. The design to have a geometrical-pattern field. Window is 4 feet 6 inches by 7 feet, inside jamb size, vertically divided into two leaves, opening out. Show elevation and section at 1½-inch scale.

Co-operative Apartment Building, Chicago, Ills. ROBERT S. DE GOLYER & CO., ARCHITECTS



First-Floor Plan

Lobby

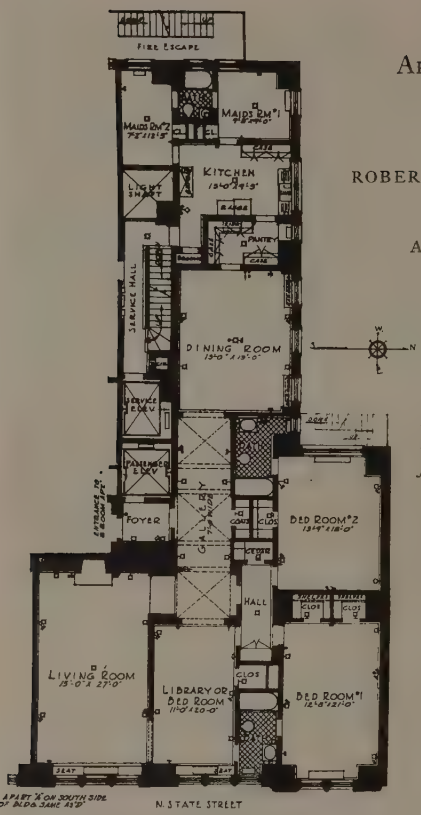
Co-operative Apartment Building, Chicago, Ills.

ROBERT S. DE GOLYER & CO., ARCHITECTS

Co-operative Apartment Building, Chicago, Ills. ROBERT S. DE GOLYER & CO., ARCHITECTS

Co-operative Apartment Building Chicago, Ills.

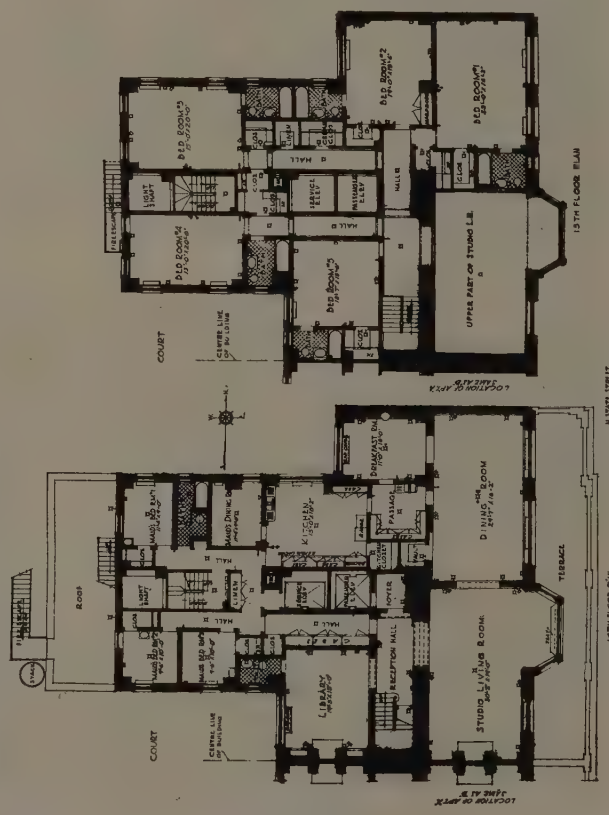
ROBERTS S. DE GOLYER & CO. ARCHITECTS



Typical 8-room apartment on the 4th to 11th floors

An 8-room duplex on the 4th and 5th, 8th and 9th floors

Ten-room duplex apartment on the 12th and 13th floors



One of the two 14-room duplex apartments on the 14th and 15th floors

Pulpit, St. Bartholomew's Church, New York City

(church) bertram grosvenor goodhue, architect

(pulpit) bertram grosvenor goodhue associates, architects

LECTERN
SAINT BARTHOLOMEW'S CHURCH
NEW YORK CITY

BERTRAM GROSVENOR GOODHUE, ARCHITECT

CONTACTS

DEVOTED TO A BETTER UNDERSTANDING OF THE BUSINESS SIDE
OF ARCHITECTURE AND ITS RELATION TO THE INDUSTRIES

Architects I Have Met

By John F. Gowen

Executive Committee, Producers' Council, Affiliated with the A. I. A.

THOUGH I spend weary hours ringing doorbells in earnest endeavor to sell things to architects, I like them. As I peregrinate about I am impressed by the different types I meet. Most of them are the best of fellows outside the office, and the successful ones are darn fine fellows inside.

From my experience I would say the *genus Architectus* may be classified under six headings, viz.:

1. The Architect who hates himself.
2. The Architect who likes himself.
3. The Architect who hates me.
4. The Architect who likes me.
5. The Architect whom I hate.
6. The Architect whom I like.

1. The Architect Who Hates Himself (*Architectus Morosus*). Habitat: Sporadic; isolated; indigenous to most large cities.

He's generally a misfit and belongs in a faculty, or on a ranch, or under glass. I'm sorry for him, for, like as not, he was forced into the business and he hates it. It gives him an inferiority complex. Poor chap, he's chock-full of inhibitions. His office is bare, with one broken chair for salesmen. His girl (*not* secretary) is drab and incompetent. There is a far-away look in his eyes, and he has no soul for his work—if he has any work for his soul. He is distrustful and taciturn and gloomy. He's a failure, and he knows it.

When I get inside—I have to go in, for he won't come out—he asks querulously: "What do *you* want?" —for he's just been bullied by a man who wanted to install a letter-opening machine on sixty days' trial, and here's another of those peddlers. I open on anything but architecture, and pretty soon he thaws out a little and I get a smile out of him. When I leave he's quite chatty. Poor devil, he dreams of D'Artagnan and Sabatini, and spends his days on scale drawings of two-family houses.

2. The Architect Who Likes Himself (*Architectus Persanctus Adytifex*). Habitat: Basements of half-renovated city houses; esoteric tea-rooms.

The office-door has his name in small letters in the lower left-hand corner. His name is Algernon Fetherstonehaugh Chisingfield, 3d. A dull amber light filters through the glass. I take a long breath and plunge, as into a cold bath. The door closes softly.

From afar the deep throating of a bell and an ephemeral aroma of incense (Camel or equal). I am in a fane—a holy place. By association a gentleman, I remove my hat. In the dim light I descry a few broken ornaments that pass for ikons.

Somewhere in the vast labyrinthian recesses behind the veil the well-modulated voice of a priestess intones to the telephone the classic, time-honored chant, Old Humbug—about the important conference. After a short wait, during which I stand reverently, the priestess floats out to receive my card. I am imperiously informed that now is no time for divine ministrations, but as I importune and beat my breast I learn with fearsome joy that the Holy Man will reveal himself. I perspire limply in a Monastery-period chair, and then Mr. Chisingfield issues forth.

He wears the correct artist's costume, trick chapeau, Windsor tie, and all. He is bored and, ah, so remote. I stand lamely before the great presence (he is five feet two, with weak blue eyes and straw hair) and humbly beseech his blessing. The audience concludes with prayers and benisons, and the well-modulated priestess watches me back out.

3. The Architect Who Hates Me (*Architectus Stomachosus*). Habitat: Untidy offices and cluttered rooms.

Outside the gate are the usual signs—grimy perspectives askew on the wall, and a disintegrated model of an 1887 country house in the corner. The light is busted and there is ink on the worn carpet. The girl shrugs her shoulders wearily and says: "Yea, he'sin; h'wontsee yah." Pleasant reception. I can hear him say: "Oh, hell!" when he gets my card, and he comes to the rail and glares at me. Right away I start to leave, for he snaps out that he isn't interested, and adds that this is the fourth interruption this morning, and his pardner always talks to you salesmen, and he's away. (He bites his words off hard.)

I start to elaborate my theme, and he cuts in with: "What you say may be true, but I wouldn't put copper on a dog-house." Well, who would? His manner makes me mad, which is what he wants to do, because he is bigger than I, and he'd like to throw me out. However, I keep my temper and try to learn why he is

prejudiced (Rule No. 2, page 16, "Helpful Hints for Salesmen"). And after a lot of senseless palaver I discover that he bought Bonanza Copper in 1904 and the stuff has had four assessments and never a dividend.

Well, it's no use, so I ask him if he would like to receive our house-organ, and can we be of service at any time. And he snarls over his shoulder: "If you can make Bonanza pay, I might use some copper." And, casting all my training to the winds, I snap back: "Well, if you'd use copper once in a while, maybe your stock would get a chance to pay." And he counters with "Yah!" and glares, and I exit hastily, tripping over the rug as I go.

4. THE ARCHITECT WHO LIKES ME (*Architectus Largiloquus Venalis*). Habitat: Slightly-down-at-the-heel office-building.

He's the rarest of *rara avises:* in all my lobby-haunting I've found but one. He breezed out and glad-handed me in an outer office where there were two, unbroken, comfortable chairs. He gave me a cigarette and a match and we smoked, while he told me what a boon it was to the profession to meet an expert like me who could give so much to the poor architect who doesn't know anything, and it's so different from the old days when his father was practising and had no help whatsoever, but they built buildings in those days, and nowadays, well, dearie me, what are we coming to? And would I be interested, or perhaps have I any friends who might like to take a flyer in some real estate he and a few of his friends are syndicating?

No—Well, no harm in telling me about it, and could I, perhaps, get him trade discounts on some screens for his house? Sorry, do drop around again, we architects are absolutely dependent upon the information we get from you chaps in these days of complicated construction. Whew! He nearly sold me. I've never been back. The name on the door was J. Barret Crossingford, Specialist in Architectural Developments. Specialist?—I'll tell the world!

5. THE ARCHITECT WHOM I HATE (*Architectus Persapientus Condescendens*). Habitat: Any large office has one or more.

I can stand the holy kind and the effusive kind and the grouchy kind and the helpless kind, but I hate, with primordial hatred, the architect who puts his arm around me and assures me that he knows all about copper. Grrrh! And he really thinks he does.

I try to do my stuff, but he stops me with a mellow gesture and, before I get away, he tells me what is wrong with the industry and why architects never have used, don't now, and never will, use copper, with countless enlargements upon things pertinent and impertinent, and lengthy excursions into all the pomps and vanities of this wicked world, and the only positive cure—twirling the while on their silken ribbon his glasses and, with didactic finger, punctuating his periods. And that sentence is just the way he talks. But one never can be sure of juries to-day, so I leave, speechless with rage.

6. THE ARCHITECT I LIKE (*Architectus Urbanus Intelligens*). Habitat: Gregarious; mostly any place that isn't padlocked.

The anteroom is plain and clean. There are some comfortable chairs and plenty of light. Every evidence of self-respect; mighty little *art.* Intelligent co-operation and a pleasant smile from the girl, who fills out a slip and takes it in to him. She returns quickly to say: "He's busy, will you call again?" or "He'll see you in a minute." And, if the latter (which it usually is), he does see me in a minute, for he knows time is valuable to both of us. He greets me pleasantly, and with at least a pretense of interest. He has a keen sense of humor and he asks intelligent questions. He is frank and to the point, and our business is done in five minutes. But in that five minutes I've met a man who respects me and my calling.

Sometimes he asks me inside the outer gate, and we discuss details over the drafting-table. But whether he does or not, I like him, for quackery is not in him, and a sense of true values is. He knows my place in the scheme of things, and he knows his. And, believe me, the kind of fellow I'm trying to describe is important. He's a successful architect, a leader in the profession, a big man, who not only tolerates, but is courteous to me. He has my respect and esteem because he gives me his.

[*Next month we shall print "Salesmen I Have Met," by several architects.*]

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THE MCKINLOCK CAMPUS BUILDINGS FOR NORTHWESTERN UNIVERSITY, CHICAGO

JAMES GAMBLE ROGERS; CHILDS & SMITH, ASSOCIATED, ARCHITECTS

[ARCHITECTURE *Frontispiece*]